

# Sequence Listing

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 Paoni, Nicholas F.  
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**Figure 1**

[illegible]

**Figure 1**

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**Figure 1**

**Figure 1**

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**Figure 1**

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**Figure 1**

**Figure 1**

[illegible]

**Figure 1**

**Figure 1**

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains.

Figure 1. The effect of the concentration of the inhibitor on the rate of polymerization of  $\alpha$ -methylstyrene in the presence of  $\text{SnCl}_4$  at  $25^\circ\text{C}$ . The concentration of  $\alpha$ -methylstyrene was 1.0 mol/L, and the concentration of  $\text{SnCl}_4$  was 0.01 mol/L. The concentration of the inhibitor was 0.001 mol/L (○), 0.002 mol/L (□), 0.005 mol/L (△), 0.01 mol/L (◇), 0.02 mol/L (×), 0.05 mol/L (●), 0.1 mol/L (○), 0.2 mol/L (◇), 0.5 mol/L (×), 1.0 mol/L (●).

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains.

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 Met Ala Ala Glu Glu Glu Asp Glu Val Glu Trp Val Val Glu Ser  
 1 5 10 15  
 Ile Ala Gly Phe Leu Arg Gly Pro Asp Trp Ser Ile Pro Ile Leu  
 20 25 30  
 Asp Phe Val Glu Gln Lys Cys Glu Val Asn Cys Lys Gly Gly His  
 35 40 45  
 Val Ile Thr Pro Gly Ser Pro Glu Pro Val Ile Leu Val Ala Cys  
 50 55 60  
 Val Pro Leu Val Phe Asp Asp Glu Glu Glu Ser Lys Leu Thr Tyr  
 65 70 75  
 Thr Glu Ile His Gln Glu Tyr Lys Glu Leu Val Glu Lys Leu Leu  
 80 85 90  
 Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln  
 95 100 105  
 Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala  
 110 115 120  
 Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys  
 125 130 135  
 Ala Met Met Val Gln Lys Asn Ile Glu Met Gln Leu Gln Ala Ile  
 140 145 150

Arg Ile Ile Gln Glu Arg Asn Gly Val Leu Pro Asp Cys Leu Thr  
 155 160  
 Asp Gly Ser Asp Val Val Ser Asp Leu Glu His Glu Glu Met Lys  
 170 175 180  
 Ile Leu Arg Glu Val Leu Arg Lys Ser Lys Glu Glu Tyr Asp Gln  
 185 190 195  
 Glu Glu Glu Arg Lys Arg Lys Lys Gln Leu Ser Glu Ala Lys Thr  
 200 205 210  
 Glu Glu Pro Thr Val His Ser Ser Glu Ala Ala Ile Met Asn Asn  
 215 220 225  
 Ser Gln Gly Asp Gly Glu His Phe Ala His Pro Pro Ser Glu Val  
 230 235 240  
 Lys Met His Phe Ala Asn Gln Ser Ile Glu Pro Leu Gly Arg Lys  
 245 250 255  
 Val Glu Arg Ser Glu Thr Ser Ser Leu Pro Gln Lys Gly Leu Lys  
 260 265 270  
 Ile Pro Gly Leu Glu His Ala Ser Ile Glu Gly Pro Ile Ala Asn  
 275 280 285  
 Leu Ser Val Leu Gly Thr Glu Glu Leu Arg Gln Arg Glu His Tyr  
 290 295 300  
 Leu Lys Gln Lys Arg Asp Lys Leu Met Ser Met Arg Lys Asp Met  
 305 310 315  
 Arg Thr Lys Gln Ile Gln Asn Met Glu Gln Lys Gly Lys Pro Thr  
 320 325 330  
 Gly Glu Val Glu Glu Met Thr Glu Lys Pro Glu Met Thr Ala Glu  
 335 340 345  
 Glu Lys Gln Thr Leu Leu Lys Arg Arg Leu Leu Ala Glu Lys Leu  
 350 355 360  
 Lys Glu Glu Val Ile Asn Lys  
 365

<210> 9  
 <211> 418  
 <212> DNA  
 <213> Homo sapiens

<400> 9  
 gggcacagca catgtgaagt tttgatgat gaagaagaaa gcaaatgac 50  
 ctatacagag attcatcagg aatacaaaga actagtgtgaa aagctgttag 100  
 aaggttacct caaagaaatt ggaattaatg aagatcaatt tcaagaagca 150  
 tgcactttct ctottgcaaa gaccataca tcacaggcca tttttgcaac 200  
 ctgtgtttgc agcagaagat ttactatct ttaaagcaat gatggtccag 250  
 aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

tggtgtatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350  
ttgaacacga agagatgaaa atcctgaggg aagttcttag aaaatcaaaa 400  
gaggaatatg accaggaa 418

<210> 10  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 10  
ttgacctata cagagattca tc 22

<210> 11  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 11  
ctaagaactt cctcaggat ttt 23

<210> 12  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 12  
atgaagatca atttcaagaa gcatgcactt ctctctttgc 40

<210> 13  
<211> 2886  
<212> DNA  
<213> Homo sapiens

<400> 13  
gcgtggtttt tgtttctgcaa taggcggcctt agagggaggg gctttttcgc 50  
ctatacctac tgtagcttct ccacgtatgg accctaagg ctactgctgc 100  
tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 150  
cactagaagc tcttctgagg gagtaatta aaaaacagtg gaatggaaaa 200  
acagtgtctg agtcatcctg taatatgctc cttgtcaaca atgtatacat 250  
tcctgtctag tgccatatc attgctttaa gctcaagtcg catcttacta 300  
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 350  
tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgcttgtgt 400  
cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 450



ttoctggaag aattctctga ttcatgaag tggtecatc ctgcctttct 500  
 ttatttctg gataactga ttgtcttcta tgtctgtcc tatcttcaac 550  
 cagccatggo tgttatcttc tcaaatTTta gcattataac aacagctctt 600  
 ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 650  
 cctctgact ttatttttgt ctattgtggc ctgactgcc gggactaaaa 700  
 ctttacagca caactggca ggacgtgat ttoatcaega tgcctttttc 750  
 agcccttcca attcctgcct tcttttcaga agtgagtgtc ccagaaaaga 800  
 caattgtaca gcaaaggaat ggacttttcc tgaagctaaa tggaacacca 850  
 cagccagagt ttccagtcac atocgtcttg gcatgggcca tgttcttatt 900  
 atagtccagt gttttatttc ttoaatggct aatatctata atgaaaagat 950  
 actgaaggag ggaaccagc tcaactgaaag catcttcata cagaacagca 1000  
 aactctattt ctttggcatt ctgtttaatg ggctgactct gggccttcag 1050  
 aggagtaacc gtgatcagat taagaactgt ggattttttt atggccacag 1100  
 tgcattttca gtagccctta tttttgtaac tgcattccag ggcctttcag 1150  
 tggctttcat totgaagtto ctggataaca tgttccatgt cttgatggcc 1200  
 caggttacca ctgtcattat cacaacagtg tctgtcctgg tctttgactt 1250  
 caggccctcc ctggaatttt tcttggaagc cccatcagtc cttctctcta 1300  
 tatttattta taatgccagc aagcctcaag ttccggaata cgcacctagg 1350  
 caagaaaaga tocgagatct aagtggcaat ctttgggagc gttccagtgg 1400  
 ggatggagaa gaactagaaa gacttaccac acccaagagt gatgagtcag 1450  
 atgaagatac ttctaaactg gtaccacat agtttgagc tctcttgaa 1500  
 cttattttca cattttcagt gtttgaata ttatctttt cactttgata 1550  
 aaccagaaat gtttctaaat cctaatttc tttgcatata tctagctact 1600  
 ccttaaatgg ttccatccaa ggcttagagt acccaaggc taagaaattc 1650  
 taaagaactg atacaggagt aacaatatga agaattcatt aatatctcag 1700  
 tacttgatac atcagaaagt tatatgtgca gattattttc cttggccttc 1750  
 aagcttccaa aaaacttgta ataatoatgt tagctatagc ttgtatatc 1800  
 acatagagat caatttgcca aatattcaca atcatgtagt tctagtttac 1850  
 atgccaagat cttccctttt taacattata aaagctaggt tgtctcttga 1900  
 attttgaggc cctagagata gtcattttgc aagtaaagag caacgggacc 1950  
 ctttctaaaa acgttggttg aaggacctaa atacctggcc ataccataga 2000  
 tttgggatga tgtagtctgt gctaaatatt ttgctgaaga agcagtttct 2050

cagacacaac atctcagaat ttttaattttt agaaattcat gggaaattgg 2100  
 atttttgtaa taatcttttg atgtttttaa cattggttcc ctagtcca 2150  
 tagttaccac ttgtatttta agtcatttaa acaagccacg gtggggcttt 2200  
 ttctctctca gtttgaggag aaaaatcttg atgtcattac tctgaatta 2250  
 ttacattttg gagaataaga gggcatttta ttttattagt tactaattca 2300  
 agctgtgact attgtatato ttccaagag ttgaaatgct ggcttcagaa 2350  
 tcataccaga ttgtcagtga agctgatgcc taggaacttt taaagggatc 2400  
 ctttcaaaa gatacacttag caaacacatg ttgactttta actgatgtat 2450  
 gaatattaat actctaaaaa tagaaagacc agtaatatat aagtcacttt 2500  
 acagtgtcac ttcacactta aaagtgcacg gtatttttca tggtaatttg 2550  
 catgcagcca gttaactctc gtagatagag aagtcagggt atagatgata 2600  
 ttaaaaatta gcaaacaaaa gtgacttgct cagggtcatg cagctgggtg 2650  
 atgatagaag agtgggcttt aactggcagg cctgtatgtt tacagactac 2700  
 catactgtaa atatgagcct tatggtgtca ttctcagaaa cttatacatt 2750  
 tctgctctcc ttctctctaa gtttcatgca gatgaatata aggtaatata 2800  
 ctattatata attcatttgt gatatccaca ataatatgac tggcaagaat 2850  
 tggtggaat ttgtaattaa aataattatt aaacct 2886

<210> 14  
 <211> 424  
 <212> PRT  
 <213> Homo sapiens

<400> 14  
 Met Glu Lys Gln Cys Cys Ser His Pro Val Ile Cys Ser Leu Ser  
 1 5 10  
 Thr Met Tyr Thr Phe Leu Leu Gly Ala Ile Phe Ile Ala Leu Ser  
 20 25 30  
 Ser Ser Arg Ile Leu Leu Val Lys Tyr Ser Ala Asn Glu Glu Asn  
 35 40 45  
 Lys Tyr Asp Tyr Leu Pro Thr Thr Val Asn Val Cys Ser Glu Leu  
 50 55 60  
 Val Lys Leu Val Phe Cys Val Leu Val Ser Phe Cys Val Ile Lys  
 65 70 75  
 Lys Asp His Gln Ser Arg Asn Leu Lys Tyr Ala Ser Trp Lys Glu  
 80 85 90  
 Phe Ser Asp Phe Met Lys Trp Ser Ile Pro Ala Phe Leu Tyr Phe  
 95 100 105  
 Leu Asp Asn Leu Ile Val Phe Tyr Val Leu Ser Tyr Leu Gln Pro  
 110 115 120

Ala Met Ala Val	Ile Phe Ser Asn Phe Ser	Ile Ile Thr Thr	Ala
	125	130	135
Leu Leu Phe Arg	Ile Val Leu Lys Arg Arg	Leu Asn Trp Ile	Gln
	140	145	150
Trp Ala Ser Leu	Leu Thr Leu Phe Leu Ser	Ile Val Ala Leu	Thr
	155	160	165
Ala Gly Thr Lys	Thr Leu Gln His Asn Leu	Ala Gly Arg Gly	Phe
	170	175	180
His His Asp Ala	Phe Phe Ser Pro Ser Asn	Ser Cys Leu Leu	Phe
	185	190	195
Arg Ser Glu Cys	Pro Arg Lys Asp Asn Cys	Thr Ala Lys Glu	Trp
	200	205	210
Thr Phe Pro Glu	Ala Lys Trp Asn Thr Thr	Ala Arg Val Phe	Ser
	215	220	225
His Ile Arg Leu	Gly Met Gly His Val Leu	Ile Ile Val Gln	Cys
	230	235	240
Phe Ile Ser Ser	Met Ala Asn Ile Tyr Asn	Glu Lys Ile Leu	Lys
	245	250	255
Glu Gly Asn Gln	Leu Thr Glu Ser Ile Phe	Ile Gln Asn Ser	Lys
	260	265	270
Leu Tyr Phe Phe	Gly Ile Leu Phe Asn Gly	Leu Thr Leu Gly	Leu
	275	280	285
Gln Arg Ser Asn	Arg Asp Gln Ile Lys Asn	Cys Gly Phe Phe	Tyr
	290	295	300
Gly His Ser Ala	Phe Ser Val Ala Leu Ile	Phe Val Thr Ala	Phe
	305	310	315
Gln Gly Leu Ser	Val Ala Phe Ile Leu Lys	Phe Leu Asp Asn	Met
	320	325	330
Phe His Val Leu	Met Ala Gln Val Thr Thr	Val Ile Ile Thr	Thr
	335	340	345
Val Ser Val Leu	Val Phe Asp Phe Arg Pro	Ser Leu Glu Phe	Phe
	350	355	360
Leu Glu Ala Pro	Ser Val Leu Leu Ser Ile	Phe Ile Tyr Asn	Ala
	365	370	375
Ser Lys Pro Gln	Val Pro Glu Tyr Ala Pro	Arg Gln Glu Arg	Ile
	380	385	390
Arg Asp Leu Ser	Gly Asn Leu Trp Glu Arg	Ser Ser Gly Asp	Gly
	395	400	405
Glu Glu Leu Glu	Arg Leu Thr Lys Pro Lys	Ser Asp Glu Ser	Asp
	410	415	420
Glu Asp Thr Phe			

<210> 15  
<211> 755  
<212> DNA  
<213> Homo sapiens

<400> 15  
cgtgcctcgcg caatgggtgt cgggtccgct ttttccaat cggacgtaa 50  
tcgtggtttt tgttctgcaa taggcggctt agaggagggt gctttttcgc 100  
ctatacctac tgtagcttct ccacgtatgg accctaaaagg ctactgctgc 150  
tactacgggg ctgacagtt actgtctcag ctctaggatg tgcgttcttc 200  
cactagaagc tcttctgagg gaggttaatta aaaaacagtg gaatggaaaa 250  
acagtgcctg agtcacccctg taatatgctc cttgtcaaca atgtatacat 300  
tctgcctagg tgccatattc attgctttta gctcaagtcg catcttacta 350  
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 400  
tgtgaatgtg tgctcagaac tggatgaagct agttttctgt gtgcttctgt 450  
cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 500  
tcttggaagg aattctctga ttctcatgaag tggctcattc ctgcctttct 550  
ttatttctct gataacttga ttgtcttcta tgcctgtcc tatcttcaac 600  
cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 650  
ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 700  
cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 750  
cttta 755

<210> 16  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 16  
ctatacctac tgtagcttct 20

<210> 17  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 17  
tcagagaatt cttccagga 20

<210> 18  
<211> 40  
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtgt agtcatcctg taatatgctc ctgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

cggacgcgtg ggcggacgcg tggcgcgacg cgtggggcgg gcttggctag 50  
cgcgcgcgcg cgtggctaa ggcgtgtacg aagcagagctt gggaggagca 100  
gcggcctgcg ggcgagagga gcatcccgtc taccaggctc caagcgcgct 150  
ggcccgcgcg tcatggccaa aggagaaggc gccgagagcg gctcgcggcg 200  
ggggctgcta cccaccagca tcctccaaag cactgaacgc cgggccagg 250  
tgaagaaaga accgaaaaag aagaaacaac agttgtctgt ttgcaacaag 300  
cttgcgtatg cacttggggg agcccccctac cagggtgacgg gctgtgccct 350  
gggtttcttc cttcagatct acctattgga tgtggctcag gtgggccctt 400  
totctgcctc ccatcctctg ttgtggggcc gagcctggga tgccatcaca 450  
gacccctctg tgggcctctg catoagcaaa tcccctggga cctgcctggg 500  
tcgccttatg ccttggatca tcttctccac gccctgggcc gtcattgcct 550  
acttctcat ctggttctgt ccgacttcc cacacggcca gacctattgg 600  
tacctgttt totattgcct cttgaaaca atggtcacgt gtttccatgt 650  
tccctactcg gctctacca tgttcatcag caaccgagca gactgagcgg 700  
gattctgcca cgcctatcg gatgactgtg gaagtgtcgg gcacagtgt 750  
gggcacggcg atccaggagc aaatcgtggg ccaagcagac acgccttgtt 800  
tcaggagact caatagctct acagtagctt cacaagatgc caaccataca 850  
catggcacca cttcacacag ggaacgcaa aaggcatacc tgctggcagc 900  
gggggtcatt gtctgtatct atataatctg tgctgtcatc ctgatcctgg 950  
gcgtgcggga gcagagagaa ccctatgaag ccagcagtc tgagccaatc 1000  
gcctacttcc ggggcctacg gctggtcacg agccacggcc catacatcaa 1050  
acttattact ggcttctctc tcacctcctt ggctttcatg ctgggtggagg 1100  
ggaactttgt cttgttttgc acctacacct tgggcttccg caatgaattc 1150  
cagaatctac tcttggccat catgctctcg gccactttaa cattcccat 1200  
ctggcagtggt ttcttgacct gggttggcaa gaagacagct gtatatgttg 1250

ggatctcato agcagtgcca tttctcatct tgggtggccct catggagagt 1300  
 aacctcatca ttacatatgc ggtagctgtg gcagctggca tcagtgtgga 1350  
 agctgcctto ttaactaccct ggtccatgct gcctgatgtc attgacgact 1400  
 tccatctgaa gcagcccccac ttccatggaa ccgagcccat cttcttctcc 1450  
 ttctatgtct tcttcaccaa gtttgccctct ggagtgtcac tgggcatttc 1500  
 taccctcagt ctggactttg cagggtacca gaccctggc tgctgcgacg 1550  
 cggaacgtgt caagtttaca ctgaacatgc tcgtgacctg ggctcccata 1600  
 gttctcatcc tgctgggcct gctgctcttc aaaatgtacc ccattgatga 1650  
 ggagaggcgg cggcagaata agaaggccct gcaggcactg agggacgagg 1700  
 ccagcagctc tggctgctca gaaacagact ccacagagct ggctagcatc 1750  
 ctctagggcc cgccacgttg cccgaagcca ccatgcagaa ggcacagaa 1800  
 gggatcagga cctgtctgcc ggcttgctga gcagctggac tgcaggtgct 1850  
 aggaagggaa ctgaagactc aaggaggtgg ccaggagac ttgctgtgct 1900  
 cactgtgggg cggctgctc tggtggcctcc tgccctccct ctgctgctc 1950  
 gtggggccaa gccctggggc tgccactgtg aatagccaa ggactgatcg 2000  
 ggcctagccc ggaactacta ttagaaaacc tttttttac agagccta 2050  
 taataactta atgactgtgt acatagcaat gtgtgtgtat gtatatgtct 2100  
 gtgagctatt aatgttatta attttcataa aagctggaaa gc 2142

<210> 20  
 <211> 458  
 <212> PRT  
 <213> Homo sapiens

<400> 20  
 Met Trp Leu Arg Trp Ala Leu Ser Leu Pro Pro Ser Ser Cys Leu  
 1 5 10  
 Trp Ala Glu Pro Gly Met Pro Ser Gln Thr Pro Trp Trp Ala Ser  
 20 25 30  
 Ala Ser Ala Asn Pro Pro Gly Pro Ala Trp Val Ala Leu Cys Pro  
 35 40 45  
 Gly Ser Ser Ser Pro Arg Pro Trp Pro Ser Leu Pro Thr Ser Ser  
 50 55 60  
 Ser Gly Ser Cys Pro Thr Ser His Thr Ala Arg Pro Ile Gly Thr  
 65 70 75  
 Cys Phe Ser Ile Ala Ser Leu Lys Gln Trp Ser Arg Val Ser Met  
 80 85 90  
 Phe Pro Thr Arg Leu Ser Pro Cys Ser Ser Ala Thr Glu Gln Thr  
 95 100 105

Glu Arg Asp Ser Ala Thr Ala Tyr Arg Met Thr Val Glu Val Leu  
 110 115 120  
 Gly Thr Val Leu Gly Thr Ala Ile Gln Gly Gln Ile Val Gly Gln  
 125 130 135  
 Ala Asp Thr Pro Cys Phe Gln Asp Phe Asn Ser Ser Thr Val Ala  
 140 150  
 Ser Gln Ser Ala Asn His Thr His Gly Thr Thr Ser His Arg Glu  
 155 160 165  
 Thr Gln Lys Ala Tyr Leu Leu Ala Ala Gly Val Ile Val Cys Ile  
 170 175 180  
 Tyr Ile Ile Cys Ala Val Ile Leu Ile Leu Gly Val Arg Glu Gln  
 185 190 195  
 Arg Glu Pro Tyr Glu Ala Gln Gln Ser Glu Pro Ile Ala Tyr Phe  
 200 205 210  
 Arg Gly Leu Arg Leu Val Met Ser His Gly Pro Tyr Ile Lys Leu  
 215 220 225  
 Ile Thr Gly Phe Leu Phe Thr Ser Leu Ala Phe Met Leu Val Glu  
 230 235 240  
 Gly Asn Phe Val Leu Phe Cys Thr Tyr Thr Leu Gly Phe Arg Asn  
 245 250 255  
 Glu Phe Gln Asn Leu Leu Leu Ala Ile Met Leu Ser Ala Thr Leu  
 260 265 270  
 Thr Ile Pro Ile Trp Gln Trp Phe Leu Thr Arg Phe Gly Lys Lys  
 275 280 285  
 Thr Ala Val Tyr Val Gly Ile Ser Ser Ala Val Pro Phe Leu Ile  
 290 295 300  
 Leu Val Ala Leu Met Glu Ser Asn Leu Ile Ile Thr Tyr Ala Val  
 305 310 315  
 Ala Val Ala Ala Gly Ile Ser Val Ala Ala Phe Leu Leu Pro  
 320 325 330  
 Trp Ser Met Leu Pro Asp Val Ile Asp Asp Phe His Leu Lys Gln  
 335 340 345  
 Pro His Phe His Gly Thr Glu Pro Ile Phe Phe Ser Phe Tyr Val  
 350 355 360  
 Phe Phe Thr Lys Phe Ala Ser Gly Val Ser Leu Gly Ile Ser Thr  
 365 370 375  
 Leu Ser Leu Asp Phe Ala Gly Tyr Gln Thr Arg Gly Cys Ser Gln  
 380 385 390  
 Pro Glu Arg Val Lys Phe Thr Leu Asn Met Leu Val Thr Met Ala  
 395 400 405  
 Pro Ile Val Leu Ile Leu Leu Gly Leu Leu Leu Phe Lys Met Tyr  
 410 415 420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln  
 425 430  
 Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp  
 440 445 450  
 Ser Thr Glu Leu Ala Ser Ile Leu  
 455

<210> 21  
 <211> 571  
 <212> DNA  
 <213> Homo sapiens

<400> 21  
 gggaaacgca aaaggcatatc ctgctggcag cgggggtcat tgtctgtatc 50  
 tatataatct gtgctgtcat cctgatcctg ggcgtgcggg agcagagaga 100  
 accctatgaa gccacgagct ctgagccaat cgcctacttc cggggcctac 150  
 ggctggctcat gagccacggc ccatacatca aactatttac tggcttcttc 200  
 ttccactctc tggctttcat gctgggtgag gggaactttg tcttgttttg 250  
 caccctacac ttgggcttcc gcaatgaatt ccagaatcta ctctggcca 300  
 tcatgtctct ggccacttta accattccca tctggcagtg gttcttgacc 350  
 cggtttgga agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400  
 atttctcatc ttgggtggcc tcattggagag taacctcatc attacatatg 450  
 cggtagctgt ggcagctggc atcagtggtg cagctgcctt ctactaccc 500  
 tggtcacatg tgctgatgt cattgacgac ttccatctga agcagcccca 550  
 cttccatgga accgagccca t 571

<210> 22  
 <211> 1173  
 <212> DNA  
 <213> Homo sapiens

<400> 22  
 ggggcttcgg cgccagcggc cagcgtagtg cggctctgga aggatttaca 50  
 aaaggtgcag gtatgagcag gtctgaagac taacattttg tgaagtgtga 100  
 aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagtttc 150  
 cttccttcag cccttgtaat ttggacatct gotgctttca tattttcata 200  
 cattactgca gtaacactcc accatataga ccggccttta cttatatca 250  
 gtgacactgg tacagtagct ccagaaaaat gcttattttg ggcaatgcta 300  
 aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350  
 agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaacaagg 400  
 ctggccttgt acttgaata ctgagttggt taggactttc tattgtggca 450



aacttcaga aaacaacct ttttgctgca catgtaagt gagctgtgct 500  
tacotttggg atgggctcat tatatatgtt tgttcagacc atcctttcct 550  
accaaatgca gcccaaaatc catggcaaac aagtcttctg gatcagactg 600  
ttgttggtta tctggtgtgg agtaagtgca cttagcatgc tgacttgctc 650  
atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700  
attggaaccc cgaggacaaa ggttatgtgc ttoacatgat cactactgca 750  
gcagaatggt ctatgtcatt ttcttctttt ggttttttcc tgacttacat 800  
tcgtgatatt cagaaaattt ctttacgggt ggaagccaat ttacatggat 850  
taaccttcta tgacactgca ccttgcccta ttaacaatga acgaacacgg 900  
ctactttcca gagatatttg atgaaaggat aaaatatttc tgtaattgatt 950  
atgattctca gggattgggg aaagggtcac agaagttgct tattcttctc 1000  
tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050  
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100  
atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150  
gaaaataaag tcaaaagact atg 1173

<210> 23  
<211> 266  
<212> PRT  
<213> Homo sapiens

<400> 23  
Met Trp Trp Phe Gln Gln Gly Leu Ser Phe Leu Pro Ser Ala Leu  
1 5 10 15  
Val Ile Trp Thr Ser Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala  
20 25 30  
Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp  
35 40 45  
Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu  
50 55 60  
Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr  
65 70 75  
Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys  
80 85 90  
Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly  
95 100 105  
Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala  
110 115 120  
His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr  
125 130 135

Met	Phe	Val	Gln	Thr	Ile	Leu	Ser	Tyr	Gln	Met	Gln	Pro	Lys	Ile
				140					145					150
His	Gly	Lys	Gln	Val	Phe	Trp	Ile	Arg	Leu	Leu	Leu	Val	Ile	Trp
				155					160					165
Cys	Gly	Val	Ser	Ala	Leu	Ser	Met	Leu	Thr	Cys	Ser	Ser	Val	Leu
				170					175					180
His	Ser	Gly	Asn	Phe	Gly	Thr	Asp	Leu	Glu	Gln	Lys	Leu	His	Trp
				185					190					195
Asn	Pro	Glu	Asp	Lys	Gly	Tyr	Val	Leu	His	Met	Ile	Thr	Thr	Ala
				200					205					210
Ala	Glu	Trp	Ser	Met	Ser	Phe	Ser	Phe	Phe	Gly	Phe	Phe	Leu	Thr
				215					220					225
Tyr	Ile	Arg	Asp	Phe	Gln	Lys	Ile	Ser	Leu	Arg	Val	Glu	Ala	Asn
				230					235					240
Leu	His	Gly	Leu	Thr	Leu	Tyr	Asp	Thr	Ala	Pro	Cys	Pro	Ile	Asn
				245					250					255
Asn	Glu	Arg	Thr	Arg	Leu	Leu	Ser	Arg	Asp	Ile				
				260					265					

<210> 24  
 <211> 485  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 14, 484  
 <223> unknown base

<400> 24  
 cggacgcttg ggcngcgcca gcggccagcg ctagtgggtc tggttaagtgc 50  
 ctgatgccga gttccgtctc tcgggtcttt tcttggtccc aggcmaaagcg 100  
 gagcggagat cctcaaacgg cctagtgcct cgcgcttccg gagaaatca 150  
 gcgggtctaat taattcctct ggtttgttga agcagttacc aagaatcttc 200  
 aaccctttcc cacaaaagct aattgagtac acgttcctgt tgagtacacg 250  
 ttctctgttga tttacaaaag gtgcagggtat gacgaggtct gaagactaac 300  
 attttgtgaa gttgtaaaac agaaaacctg ttagaaatgt ggtggtttca 350  
 gcaaggcctc agtttccttc cttcagccct tgtaatttgg acatctgtgtg 400  
 ctttcatatt ttcatacatt actgcagtaa cactccacca tatagaccgc 450  
 gctttacctt atatoagtga cactggtaca gtanc 485

<210> 25  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 25  
acctgttaga aatgtggtgg ttccagcaag gcctcagttt 40

<210> 26  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 26  
ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27  
<211> 1399  
<212> DNA  
<213> Homo sapiens

<400> 27  
cccacgcgtc cgcccgccgc tgcgtcccgg agtgcaagtg agcttctcgg 50  
ctgcccgcgg ggccgggggtg cggagccgac atgcgcccg cttctggcct 100  
ccttctggto ttgcgcgggt gcaccttcgc ctgttacttg ctgtcgacgc 150  
gactgccccg cgggcgagga ctgggctcca cggaggaggc tggaggcagg 200  
tcgtctgtgtg tccctccga cctggcagag ctgcgggagc tctctgaggt 250  
ccttcgagag taccggaagg agcaccaggc ctacgtgttc ctgctcttct 300  
gcggcgcccta cctctacaaa cagggccttg ccatccccgg ctccagcttc 350  
ctgaatgttt tagctgggtc cttgtttggg ccatggctgg ggttctgtct 400  
gtgctgtgtg ttgacctcg tgggtgccac atgctgtctac ctgctctcca 450  
gtatttttgg caaacagttg gtggtgtcct actttctga taaagtggcc 500  
ctgctgcaga gaaaggtgga ggagaacaga aacagcttgt tttttttott 550  
attgtttttg agacttttcc ccatgacacc aaactggttc ttgaacctct 600  
cggccccaat tctgaacatt ccatgtgtgc agttcttctt ctgagttctt 650  
atcggtttga tcccatataa ttcatctgt gtgcagacag ggtccatcct 700  
gtcaacccta acctctctgg atgctctttt ctctctggag actgtcttta 750  
agctgttggc cattgccatg gtggcattaa ttctctggaac cctcattaaa 800  
aaatttagtc agaaaacatct gcaattgaat gaaacaagta ctgctaatac 850  
tatacacagt agaaaagaca catgatctgg attttctgtt tgccacatcc 900  
ctggactcag ttgcttattt gtgtaatgga tgtggtcctc taaagccctc 950  
cattgttttt gattgccttc tataggtgat gtggacactg tgcataatg 1000

tgcagtgctc ttccagaaag gacactctgc tcttgaaggt gtattacatc 1050  
 aggttttcaa accagccctg gtgtagcaga cactgcaaca gatgcctcct 1100  
 agaaaatgct gtttgtggcc gggcgcggtg gctcagcctt gtaatcccag 1150  
 cactttggga gcccgaggcc ggtgattcac aaggtcagga gttcaagacc 1200  
 agcctggcca agatggtgaa atcctgtctc taataaaaat acaaaaatta 1250  
 gccaggcggt gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300  
 gcaggagaat tgcttgaacc aaggtggcag aggttgagc aagccaagat 1350  
 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28  
 <211> 264  
 <212> PRT  
 <213> Homo sapiens

<400> 28  
 Met Arg Pro Leu Leu Gly Leu Leu Leu Val Phe Ala Gly Cys Thr  
 1 5 10 15  
 Phe Ala Leu Tyr Leu Leu Ser Thr Arg Leu Pro Arg Gly Arg Arg  
 20 25 30  
 Leu Gly Ser Thr Glu Glu Ala Gly Gly Arg Ser Leu Trp Phe Pro  
 35 40 45  
 Ser Asp Leu Ala Glu Leu Arg Glu Leu Ser Glu Val Leu Arg Glu  
 50 55 60  
 Tyr Arg Lys Glu His Gln Ala Tyr Val Phe Leu Leu Phe Cys Gly  
 65 70 75  
 Ala Tyr Leu Tyr Lys Gln Gly Phe Ala Ile Pro Gly Ser Ser Phe  
 80 85 90  
 Leu Asn Val Leu Ala Gly Ala Leu Phe Gly Pro Trp Leu Gly Leu  
 95 100 105  
 Leu Leu Cys Cys Val Leu Thr Ser Val Gly Ala Thr Cys Cys Tyr  
 110 115 120  
 Leu Leu Ser Ser Ile Phe Gly Lys Gln Leu Val Val Ser Tyr Phe  
 125 130 135  
 Pro Asp Lys Val Ala Leu Leu Gln Arg Lys Val Glu Glu Asn Arg  
 140 145 150  
 Asn Ser Leu Phe Phe Phe Leu Leu Phe Leu Arg Leu Phe Pro Met  
 155 160 165  
 Thr Pro Asn Trp Phe Leu Asn Leu Ser Ala Pro Ile Leu Asn Ile  
 170 175 180  
 Pro Ile Val Gln Phe Phe Phe Ser Val Leu Ile Gly Leu Ile Pro  
 185 190 195  
 Tyr Asn Phe Ile Cys Val Gln Thr Gly Ser Ile Leu Ser Thr Leu  
 200 205 210

Thr Ser Leu Asp Ala Leu Phe Ser Trp Asp Thr Val Phe Lys Leu  
 215 220  
 Leu Ala Ile Ala Met Val Ala Leu Ile Pro Gly Thr Leu Ile Lys  
 230 235 240  
 Lys Phe Ser Gln Lys His Leu Gln Leu Asn Glu Thr Ser Thr Ala  
 245 250 255  
 Asn His Ile His Ser Arg Lys Asp Thr  
 260

<210> 29  
 <211> 1292  
 <212> DNA  
 <213> Homo sapiens

<400> 29  
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 gtcaatcatt ttccagttct cagccgctca gttgtgatca agggacacgt 100  
 ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150  
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200  
 tcagagactg ttgatttggg gagacagacc ggccatcagt gtggcatgtc 250  
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300  
 ctcagagacc cccccgcag tatctctccc ttatagttgt gtataaggtt 350  
 ctgcacacct tgggattaat cttgctcact gcctactttg tgattcaacc 400  
 tttcagccca ttagcacctg agccagtgtc ttctggagct cacacctggc 450  
 gctcactcat ccatcacatt aggctgatgt ccttgcccat tgccaagaag 500  
 tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550  
 accctttcca gactttgacc cctggtggac aaacgactgt gagcagaatg 600  
 agtcagagcc cattcctgcc aactgcactg gctgtgccca gaaacacctg 650  
 aaggtgatgc tcttggaaga cgccecaagg aaatttgaga ggctccatcc 700  
 actggtgatc aagacgggaa agcccctgtt ggaggaagag attcagcatt 750  
 ttttgtgcca gtaccctgag gcgacagaag gcttctctga agggtttttc 800  
 gccaaagtgt ggcgctgctt tctgagcggg tggttcccat ttcttatcc 850  
 atggaggaga cctctgaaca gatcacaaat gttacgtgag ctttttctg 900  
 ttttcaacta cctgccattt ccaaagatg cctctttaaa caagtgtccc 950  
 tttcttcacc cagaacctgt tgtggggagt aagatgcata agatgcctga 1000  
 cctattttac attggcagcg gtgaggccat gttgcagctc atccctccct 1050  
 tccagtgccg aagacattgt cagtctgtgg ccatgccaat agagccaggg 1100  
 gatatcggtg atgtcgacac caccactggg aaggtctacg ttatagccag 1150

aggggtccag ccttttgtca tctgcgatgg aaccgctttc tcagaactgt 1200  
 aggaaataga actgtgcaca ggaacagctt ccagagccga aaaccaggtt 1250  
 gaaaggggaa aaataaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30  
 <211> 347  
 <212> PRT  
 <213> Homo sapiens

<400> 30  
 Met Asp Leu Ala Ala Asn Glu Ile Ser Ile Tyr Asp Lys Leu Ser  
 1 5 10 15  
 Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met  
 20 25 30  
 Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys  
 35 40 45  
 Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val  
 50 55 60  
 Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala  
 65 70 75  
 Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val  
 80 85 90  
 Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg  
 95 100 105  
 Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys  
 110 115 120  
 Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp  
 125 130 135  
 Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu  
 140 145 150  
 Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys  
 155 160 165  
 Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His  
 170 175 180  
 Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile  
 185 190 195  
 Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser  
 200 205 210  
 Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp  
 215 220 225  
 Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln  
 230 235 240  
 Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro  
 245 250 255

Lys Asp Ala Ser Leu Asn Lys Cys Ser Phe Leu His Pro Glu Pro  
 260 265 270  
 Val Val Gly Ser Lys Met His Lys Met Pro Asp Leu Phe Ile Ile  
 275 280 285  
 Gly Ser Gly Glu Ala Met Leu Gln Leu Ile Pro Pro Phe Gln Cys  
 290 295 300  
 Arg Arg His Cys Gln Ser Val Ala Met Pro Ile Glu Pro Gly Asp  
 305 310 315  
 Ile Gly Tyr Val Asp Thr Thr His Trp Lys Val Tyr Val Ile Ala  
 320 325 330  
 Arg Gly Val Gln Pro Leu Val Ile Cys Asp Gly Thr Ala Phe Ser  
 335 340 345  
 Glu Leu

<210> 31  
 <211> 478  
 <212> DNA  
 <213> Homo sapiens

<400> 31  
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 gcccgagggg cgcgagcccc gcatgaatca ttgtagtaaa tcattttcca 100  
 gttctcagcc gttcagttgt gatcaaggga cactgtgttt ccgaactgcc 150  
 agctcagaat aggaaaaataa cttgggattt tatattggaa gacatggatc 200  
 ttgctgccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250  
 ttggtgagac agaccggcca tcagtgtggc atgtcagaga aggcaattga 300  
 aaaatttatc agacagctgc tggaaaagaa tgaacctcag agaccccccc 350  
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttggga 400  
 ttaattcttc tcaactgccta ctttgtgatt caacctttca gccattagc 450  
 aactgagcca gtgctttgtg gagctcac 478

<210> 32  
 <211> 3531  
 <212> DNA  
 <213> Homo sapiens

<400> 32  
 cccacgcgtc cgcccacgcg tccggctgaa cactctttct ttggagtcag 50  
 ccactgatga ggcagggtcc ccacttgtag ctgcagcagc tgcagcagct 100  
 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgctagaccg 150  
 tgccctatgag ccgctggggc tgcagtgagg actgccctcc ctgccaccca 200  
 ccaatggcag cccaccttc tttgaagact tccaggcttt ttgtgccaca 250

cccgaatggc gccacttcat cgacaaacag gtacagccaa ccatgtocca 300  
 gttcgaatg gacacgtatg ctaagagcca cgaccttatg tcaggtttct 350  
 ggaatgcctg ctatgacatg cttatgagca gtgggcagcg gcgccagtg 400  
 gagcgcgccc agagtcgtcg ggccctccag gagctggtgc tggaaacctgc 450  
 gcagaggcgg gcgcgcctgg aggggctacg ctacacggca gtgctgaagc 500  
 agcaggcaac gcagcactcc atggccctgc tgcactgggg gcgctgtg 550  
 cgccagctcg ccagcccatg tggggcctgg gcgctgaggg acactcccat 600  
 ccccgctgg aaactgtcca gcgcgagac atattcacgc atgctgtga 650  
 agctggtgcc caaccatcac ttcgaccctc acctggaagc cagcgtctc 700  
 cgagacaatc tgggtgaggt tccctgaca cccaccagg aggcctcact 750  
 gcctctggca gtgaccaaag aggccaaagt gagcaccca cccgagttgc 800  
 tgcaggagga ccagctcggc gaggacgagc tggctgagct ggagaccccg 850  
 atggaggcag cagaactgga tgagcagcgt gagaagctgg tgcgtgcgc 900  
 cgagtgcag ctggtgacgg tagtgccgt ggtcccagg ctgctggagg 950  
 tcaccacaca gaatgtatac ttctacgatg gcagcactga gcgctggaa 1000  
 accgaggagg gcactcgcta tgatttcgg cgccactgg ccagctgcg 1050  
 tgaggtocac ctgcggcgtt tcaacctgcg ccgttcacga cttgagctct 1100  
 tctttatoga tcaggccaac tacttctca acttccatc caagtggtggc 1150  
 acgaccccg tctcatctcc tagccagact ccgagacccc agcctggccc 1200  
 catccacccc catacccagg tacggaacca ggtgtactcg tggctcctgc 1250  
 gcctacggcc cccctctcaa ggctacctaa gcagccgctc ccccaggag 1300  
 atgctgcgtg cctcaggcct tacccagaaa tgggtacagc gtgagatc 1350  
 caacttcgag tacttgatgc aactcaacac cattgcgggg cggacctaca 1400  
 atgacctgtc tcagtaacct gtgttccct gggctcctga ggaactagtg 1450  
 tccccacccc tggacctcag caaccagccc gtcttcctgg acctgtctaa 1500  
 gcccatcggt gtggtgaacc ccaagcatgc ccagctcgtg agggagaagt 1550  
 atgaaagctt tgaggacca gcagggaacca ttgacaagtt ccactatggc 1600  
 acccactact ccaatgcagc aggcgtgatg cactacctca tccgctgga 1650  
 gcccttcacc tccctgcacg tccagctgca aagtgcccg tttgactgct 1700  
 ccgacggcca gttccactcg gtggcgagc cctggcaggc acgcctggag 1750  
 agccctgccg atgtgaagga gctcatcccg gaattcttct actttcctga 1800  
 cttcctggag aaccagaacg gttttgacct gggctgtctc cagctgacca 1850





gttaccacct cagggatttg cgggcggaag tcccgccctt cgccggctga 3500

ggggccgccc tgagggccag cactggcgctc t 3531

<210> 33

<211> 1003

<212> PRT

<213> Homo sapiens

<400> 33

Met	Ser	Gln	Phe	Glu	Met	Asp	Thr	Tyr	Ala	Lys	Ser	His	Asp	Leu
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Met	Ser	Gly	Phe	Trp	Asn	Ala	Cys	Tyr	Asp	Met	Leu	Met	Ser	Ser
				20					25					30

Gly	Gln	Arg	Arg	Gln	Trp	Glu	Arg	Ala	Gln	Ser	Arg	Arg	Ala	Phe
				35					40					45

Gln	Glu	Leu	Val	Leu	Glu	Pro	Ala	Gln	Arg	Arg	Ala	Arg	Leu	Glu
				50				55						60

Gly	Leu	Arg	Tyr	Thr	Ala	Val	Leu	Lys	Gln	Gln	Ala	Thr	Gln	His
				65					70					75

Ser	Met	Ala	Leu	Leu	His	Trp	Gly	Ala	Leu	Trp	Arg	Gln	Leu	Ala
				80					85					90

Ser	Pro	Cys	Gly	Ala	Trp	Ala	Leu	Arg	Asp	Thr	Pro	Ile	Pro	Arg
				95					100					105

Trp	Lys	Leu	Ser	Ser	Ala	Glu	Thr	Tyr	Ser	Arg	Met	Arg	Leu	Lys
				110					115					120

Leu	Val	Pro	Asn	His	His	Phe	Asp	Pro	His	Leu	Glu	Ala	Ser	Ala
				125					130					135

Leu	Arg	Asp	Asn	Leu	Gly	Glu	Val	Pro	Leu	Thr	Pro	Thr	Glu	Glu
				140					145					150

Ala	Ser	Leu	Pro	Leu	Ala	Val	Thr	Lys	Glu	Ala	Lys	Val	Ser	Thr
				155					160					165

Pro	Pro	Glu	Leu	Leu	Gln	Glu	Asp	Gln	Leu	Gly	Glu	Asp	Glu	Leu
				170					175					180

Ala	Glu	Leu	Glu	Thr	Pro	Met	Glu	Ala	Ala	Glu	Leu	Asp	Glu	Gln
				185					190					195

Arg	Glu	Lys	Leu	Val	Leu	Ser	Ala	Glu	Cys	Gln	Leu	Val	Thr	Val
				200					205					210

Val	Ala	Val	Val	Pro	Gly	Leu	Leu	Glu	Val	Thr	Thr	Gln	Asn	Val
				215					220					225

Tyr	Phe	Tyr	Asp	Gly	Ser	Thr	Glu	Arg	Val	Glu	Thr	Glu	Glu	Gly
				230					235					240

Ile	Gly	Tyr	Asp	Phe	Arg	Arg	Pro	Leu	Ala	Gln	Leu	Arg	Glu	Val
				245					250					255

His	Leu	Arg	Arg	Phe	Asn	Leu	Arg	Arg	Ser	Ala	Leu	Glu	Leu	Phe
				260					265					270

Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val	275	280	285
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln	290	295	300
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr	305	310	315
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser	320	325	330
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln	335	340	345
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln	350	355	360
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr	365	370	375
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu	380	385	390
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile	395	400	405
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr	410	415	420
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr	425	430	435
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile	440	445	450
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly	455	460	465
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala	470	475	480
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile	485	490	495
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly	500	505	510
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp	515	520	525
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln	530	535	540
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu	545	550	555
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro	560	565	570
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu	575	580	585

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys	
				590					595					600	
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln	
				605					610					615	
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala	
				620					625					630	
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe	
				635					640					645	
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val	
				650					655					660	
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp	
				665					670					675	
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met	
				680					685					690	
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro	
				695					700					705	
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly	
				710					715					720	
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val	
				725					730					735	
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His	
				740					745					750	
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr	
				755					760					765	
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu	
				770					775					780	
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val	
				785					790					795	
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile	
				800					805					810	
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr	
				815					820					825	
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu	
				830					835					840	
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala	
				845					850					855	
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu	
				860					865					870	
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val	
				875					880					885	
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr	
				890					895					900	

Ala Leu Thr Val Thr Glu Asp Phe Val Leu Leu Gly Thr Ala Gln  
905 910 915

Cys Ala Leu His Ile Leu Gln Leu Asn Thr Leu Leu Pro Ala Ala  
920 925 930

Pro Pro Leu Pro Met Lys Val Ala Ile Arg Ser Val Ala Val Thr  
935 940 945

Lys Glu Arg Ser His Val Leu Val Gly Leu Glu Asp Gly Lys Leu  
950 955 960

Ile Val Val Val Ala Gly Gln Pro Ser Glu Val Arg Ser Ser Gln  
965 970 975

Phe Ala Arg Lys Leu Trp Arg Ser Ser Arg Ile Ser Gln Val  
980 985 990

Ser Ser Gly Glu Thr Glu Tyr Asn Pro Thr Glu Ala Arg  
995 1000

<210> 34  
<211> 43  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 34  
tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35  
<211> 1395  
<212> DNA  
<213> Homo sapiens

<400> 35  
cggaagcgtg ggcggacgcg tgggggctgt gagaaagtgc caataaatatc 50  
atcatgcaac cccacggccc acctgttgaa ctctctgtgc ccagggtga 100  
tgtgcgtctt ccagggtctac tcatccaaag gcctaatacca acgttctgtc 150  
ttcaatctgc aaatctatgg ggtcctgggg ctcttctgga ccttaactg 200  
ggtactggcc ctgggccaat ggtcctctgc tggagccttt gctccttct 250  
actgggcctt ccacaagccc caggacatcc ctaccttccc cttaatctct 300  
gccttcatcc gcacactccg ttaccacact gggtcattgg catttggagc 350  
cctcatctcg accottgtgc agatagcccg ggtcatcttg gagtatattg 400  
accacaagct cagaggagtg cagaaccctg tagcccgtg catcatgtgc 450  
tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500  
ccgcaatgca tacatcatga tcgccatcta cggaagaat ttctgtgtct 550  
cagccaaaaa tgcgttcctg ctactcatgc gaaacattgt cagggtggtc 600  
gtctctggaca aagtcacaga cctgctgtg ttctttggga agctgctgg 650

ggtcggaggc gtgggggtcc tgtccttctt ttttttctcc ggtcgcaccc 700  
 cggggctggg taaagacttt aagagccccc acctcaacta ttactggctg 750  
 cccatcatga cctccatcct gggggcctat gtcacgcgca gcggcttctt 800  
 cagcggtttc ggcatgtgtg tggacacgct cttcctctgc ttcctggaag 850  
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 agccttctaa agattctggg caagaagaac gaggcgcccc cggacaacaa 950  
 gaagaggaag aagtgcagc tccggccctg atccaggact gcacccacc 1000  
 cccaccgtcc agccatccaa cctcacttcg ccttacaggt ctccattttg 1050  
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 acactttgag aggctgaggc gggcggatca cctgagtcag gaggtcgaga 1150  
 ccagcctggc caacatggtg aaacctccgt ctctattaaa aatacaaaaa 1200  
 ttagccgaga gtggtggcat gcacctgtca tccagctac tcgggaggct 1250  
 gaggcaggag aatcgcttga acccgggagg cagagggtgc agtgagccga 1300  
 gatcgcgcca ctgcactcca acctgggtga cagactctgt ctocaaaaca 1350  
 aaacaaacaa acaaaaagat tttattaaag atattttgtt aactc 1395

<210> 36

<211> 321

<212> PRT

<213> Homo sapiens

<400> 36

Arg	Thr	Arg	Gly	Arg	Thr	Arg	Gly	Gly	Cys	Glu	Lys	Val	Pro	Ile
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Asn	Thr	Ser	Cys	Asn	Pro	Thr	Ala	His	Leu	Val	Asn	Ser	Ser	Cys
				20					25					30
Pro	Gly	Leu	Met	Cys	Val	Phe	Gln	Gly	Tyr	Ser	Ser	Lys	Gly	Leu
				35					40					45
Ile	Gln	Arg	Ser	Val	Phe	Asn	Leu	Gln	Ile	Tyr	Gly	Val	Leu	Gly
				50					55					60
Leu	Phe	Trp	Thr	Leu	Asn	Trp	Val	Leu	Ala	Leu	Gly	Gln	Cys	Val
				65					70					75
Leu	Ala	Gly	Ala	Phe	Ala	Ser	Phe	Tyr	Trp	Ala	Phe	His	Lys	Pro
				80					85					90
Gln	Asp	Ile	Pro	Thr	Phe	Pro	Leu	Ile	Ser	Ala	Phe	Ile	Arg	Thr
				95					100					105
Leu	Arg	Tyr	His	Thr	Gly	Ser	Leu	Ala	Phe	Gly	Ala	Leu	Ile	Leu
				110					115					120
Thr	Leu	Val	Gln	Ile	Ala	Arg	Val	Ile	Leu	Glu	Tyr	Ile	Asp	His
				125					130					135

Lys Leu Arg Gly Val Gln Asn Pro Val Ala Arg Cys Ile Met Cys  
 140 145 150  
 Cys Phe Lys Cys Cys Leu Trp Cys Leu Glu Lys Phe Ile Lys Phe  
 155 160 165  
 Leu Asn Arg Asn Ala Tyr Ile Met Ile Ala Ile Tyr Gly Lys Asn  
 170 175 180  
 Phe Cys Val Ser Ala Lys Asn Ala Phe Met Leu Leu Met Arg Asn  
 185 190 195  
 Ile Val Arg Val Val Val Leu Asp Lys Val Thr Asp Leu Leu Leu  
 200 205 210  
 Phe Phe Gly Lys Leu Leu Val Val Gly Gly Val Gly Val Leu Ser  
 215 220 225  
 Phe Phe Phe Phe Ser Gly Arg Ile Pro Gly Leu Gly Lys Asp Phe  
 230 235 240  
 Lys Ser Pro His Leu Asn Tyr Tyr Trp Leu Pro Ile Met Thr Ser  
 245 250 255  
 Ile Leu Gly Ala Tyr Val Ile Ala Ser Gly Phe Phe Ser Val Phe  
 260 265 270  
 Gly Met Cys Val Asp Thr Leu Phe Leu Cys Phe Leu Glu Asp Leu  
 275 280 285  
 Glu Arg Asn Asn Gly Ser Leu Asp Arg Pro Tyr Tyr Met Ser Lys  
 290 295 300  
 Ser Leu Leu Lys Ile Leu Gly Lys Lys Asn Glu Ala Pro Pro Asp  
 305 310 315  
 Asn Lys Lys Arg Lys Lys  
 320

<210> 37  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 37  
 tcgtgccacg gggctgatgt gc 22  
  
 <210> 38  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 38  
 gtctttaccc agccccggga tgcg 24  
  
 <210> 39  
 <211> 50

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 39  
ggcctaattcc aacgttctgt cttcaatctg caaatctatg gggctcctggg 50

<210> 40  
<211> 1365  
<212> DNA  
<213> Homo sapiens

<400> 40  
gagtcttgac cgccgcggg ctcttggtac ctcagcgga gcgccaggcg 50  
tcggcgccgc gtggctatgt tcgtgtccga ttccgcgaaa gaggttctacg 100  
aggtggtcca gagccagagg gtccttctct tcgtggcctc ggacgtggat 150  
gctctgtgtg cgtgcaagat ccttcaggcc ttgttccagt gtgaccacgt 200  
gcaatatacg ctgggtccag ttctcgggtg gcaagaactt gaaactgcat 250  
ttcttgagca taaagaacag ttctattatt ttattctcat aaactgtgga 300  
gctaattgag acctattgga tattcttcaa cctgatgaag acactatatt 350  
ctttgtgtgt gactccata ggccagtcga tgcgtgcaat gtatacaacg 400  
ataccagatg caaattactc attaaacaag atgatgacct tgaagttccc 450  
gcctatgaag acatcttcag ggaatgaagag gaggatgaag agcattcagg 500  
aaatgacagt gatgggtcag agccttctga gaagcgaca cggttagaag 550  
aggagatagt ggagcaaacc atgcggagga ggcagcgccg agagtgggag 600  
gcccgagaaa gagacatcct ctttgactac gagcagtatg aatatcatgg 650  
gacatcgta gccatggtga tggttgagct ggcttgatg ctgtccaagg 700  
acctgaatga catgctgtgg tgggcatcag ttggactaac agaccagtgg 750  
gtgcaagaca agatcactca aatgaaatac gtgactgatg ttggtgtcct 800  
gcagcgccac gtttccgccc acaaccaccg gaacgaggat gaggagaaca 850  
cactctcgtg ggactgcaca cgatctcctt ttgagtatga cctccgctg 900  
gtgctctacc agcactggtc cctccatgac agcctgtgca acaccagcta 950  
taccgcagcc aggttcaagc tgtggtctgt gcatggacag aagcggtctc 1000  
aggagtctct tgcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050  
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agagtctgca aataaatttg ggaatgaagga catgcgcgtg cagactttca 1150  
gcattcattt tgggttcaag cacaagtctc tggccagcga cgtggtcttt 1200



gccaccatgt ctttgatgga gagccccgag aaggatggct cagggaacaga 1250  
 tcacttcac caggtctctg acagcctctc caggagtaac ctggacaagc 1300  
 tgtaccatgg cctggaactc gccagaagc agctgcgagc caccacagcag 1350  
 accattgcca gctgc 1365

<210> 41  
 <211> 566  
 <212> PRT  
 <213> Homo sapiens

<400> 41  
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 20 25 30  
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val  
 35 40 45  
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr  
 50 55 60  
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile  
 65 70 75  
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp  
 80 85 90  
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn  
 95 100 105  
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys  
 110 115 120  
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg  
 125 130 135  
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly  
 140 145 150  
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val  
 155 160 165  
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg  
 170 175 180  
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly  
 185 190 195  
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser  
 200 205 210  
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr  
 215 220 225  
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr  
 230 235 240  
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

245					250					255						
Asn	Glu	Asp	Glu	260	Asn	Thr	Leu	Ser	265	Val	Asp	Cys	Thr	Arg	Ile	270
Ser	Phe	Glu	Tyr	275	Leu	Arg	Leu	Val	280	Leu	Tyr	Gln	His	Trp	Ser	285
Leu	His	Asp	Ser	290	Leu	Cys	Asn	Thr	295	Tyr	Thr	Ala	Ala	Arg	Phe	300
Lys	Leu	Trp	Ser	305	Val	His	Gly	Gln	310	Arg	Leu	Gln	Glu	Phe	Leu	315
Ala	Asp	Met	Gly	320	Leu	Pro	Leu	Lys	325	Val	Lys	Gln	Lys	Phe	Gln	330
Ala	Met	Asp	Ile	335	Ser	Leu	Lys	Glu	340	Asn	Leu	Arg	Glu	Met	Ile	345
Glu	Ser	Ala	Asn	350	Lys	Phe	Gly	Met	355	Asp	Met	Arg	Val	Gln	Thr	360
Phe	Ser	Ile	His	365	Phe	Gly	Phe	Lys	370	Lys	Phe	Leu	Ala	Ser	Asp	375
Val	Val	Phe	Ala	380	Thr	Met	Ser	Leu	385	Glu	Ser	Pro	Glu	Lys	Asp	390
Gly	Ser	Gly	Thr	395	Asp	His	Phe	Ile	400	Ala	Leu	Asp	Ser	Leu	Ser	405
Arg	Ser	Asn	Leu	410	Asp	Lys	Leu	Tyr	415	Gly	Leu	Glu	Leu	Ala	Lys	420
Lys	Gln	Leu	Arg	425	Ala	Thr	Gln	Gln	430	Ile	Ala	Ser	Cys	Leu	Cys	435
Thr	Asn	Leu	Val	440	Ile	Ser	Gln	Gly	445	Phe	Leu	Tyr	Cys	Ser	Leu	450
Met	Glu	Gly	Thr	455	Pro	Asp	Val	Met	460	Phe	Ser	Arg	Pro	Ala	Ser	465
Leu	Ser	Leu	Leu	470	Ser	Lys	His	Leu	475	Lys	Ser	Phe	Val	Cys	Ser	480
Thr	Lys	Asn	Arg	485	Arg	Cys	Lys	Leu	490	Pro	Leu	Val	Met	Ala	Ala	495
Pro	Leu	Ser	Met	500	Glu	His	Gly	Thr	505	Val	Val	Val	Gly	Ile	Pro	510
Pro	Glu	Thr	Asp	515	Ser	Ser	Asp	Arg	520	Asn	Phe	Phe	Gly	Arg	Ala	525
Phe	Glu	Lys	Ala	530	Ala	Glu	Ser	Thr	535	Ser	Arg	Met	Leu	His	Asn	540
His	Phe	Asp	Leu	545	Ser	Val	Ile	Glu	550	Lys	Ala	Glu	Asp	Arg	Ser	555
Lys	Phe	Leu	Asp		Ala	Leu	Ile	Ser		Leu	Leu	Ser				

<210> 42  
<211> 380  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 44, 118, 172, 183  
<223> unknown base

<400> 42  
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ccgatttccg caaagagttc tacgaggtgg tccagagcca gagggtcctt 100  
ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150  
ggccttggtc cagtgtgacc angtgcaata tangctggtt ccagtttctg 200  
ggtggcaaga acttgaaact gcatttcttg agcataaaga acagtttcat 250  
tatttttatt tcataaactg tggagctaata gtagacctat tggatattct 300  
tcaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350  
tcaatgttgt caatgtatac aacgataccc 380

<210> 43  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 43  
ttccgcaaag agttctacga ggtgg 25

<210> 44  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 44  
attgacaaca ttgactggcc tatggg 26

<210> 45  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 45  
gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgtga 50

<210> 46

<211> 3089  
 <212> DNA  
 <213> Homo sapiens

<400> 46  
 caggaaccct ctctttgggt ctggattggg acccctttcc agtaccattt 50  
 ttcttagtga accacgaagg gacgatacca gaaaacaccc tcaacccaaa 100  
 ggaaatagac tacagcccca attggctgac ttggctata gaaaaaagaa 150  
 aggaacgaaa agagacagtt ttttttgaa agctaagtct tccctttatc 200  
 gagtcaagaa accccccctt cttgagctat ttacagcttt taacaattga 250  
 gtaaagtacg ctccggctac catggtgaca gccgccctgg gtcccgtctg 300  
 ggcagcgctc ctgctctttc tcctgatgtg tgagatccgt atggtggagc 350  
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 agggagggtc cccaagggga gcctggccct cagggcagca agggtgacaa 600  
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 ctgctcttcg aaagggtctt tgtgaacctt gatgggtgct ttgacatggc 750  
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 cagaaagagg ctgtcactct gtacgcgcag ccagcgcgag gcagcatcat 900  
 gcagagccag agtgtgatgc tggacctggc ctacggggac cgcgtctggg 950  
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 cccctgcagg gctcagtttg cactgctgtg aagcagggaag gccagggagg 1150  
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 ccagcacttc taaaacttgg aaatgcatgc gaatcaccgg gggttcgtgt 1350  
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 cccctcttct cttgctcagg cctgcaccac tgcagccacc gttcatttat 1950  
 tcattcatta aacctgagc actcactctg tgctgggtcc cgggaagggt 2000  
 gagggggtca gacacaggcc ctgccctgc cctcagtgc tggccagtcc 2050  
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 cctccagctg cctcagaca ctgatgtctg tcccagggt ctctctgcc 2550  
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 ggtgctaagg ccgggtggg cagctcctcg tctcagagcc ctctccggc 2650  
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 aaacagggtc tgaccaagtg ccaggaagac ctgtgctata aaccacctg 3000  
 cctgactctg cccctgcctg accccgccac gccctgcctg ccagcatgat 3050

taaagaatgc tgtctcctct tggaaaaaaa aaaaaaaaa 3089

<210> 47

<211> 259

<212> PRT

<213> Homo sapiens

<220>

<221> Signal Peptide

<222> 1-20

<223> Signal Peptide

<220>

<221> N-glycosylation Site

<222> 72-75

<223> N-glycosylation Site

<220>

<221> C1q Domain Proteins

<222> 144-178, 78-111, 84-117

<223> C1q Domain Proteins

<400> 47

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			20						25					30
Arg	Ala	Val	Ala	Ser	Gly	Cys	Gln	Arg	Cys	Cys	Asp	Ser	Glu	Asp
			35						40					45
Pro	Leu	Asp	Pro	Ala	His	Val	Ser	Ser	Ala	Ser	Ser	Ser	Gly	Arg
			50						55					60
Pro	His	Ala	Leu	Pro	Glu	Ile	Arg	Pro	Tyr	Ile	Asn	Ile	Thr	Ile
			65						70					75
Leu	Lys	Gly	Asp	Lys	Gly	Asp	Pro	Gly	Pro	Met	Gly	Leu	Pro	Gly
			80						85					90
Tyr	Met	Gly	Arg	Glu	Gly	Pro	Gln	Gly	Glu	Pro	Gly	Pro	Gln	Gly
			95						100					105
Ser	Lys	Gly	Asp	Lys	Gly	Glu	Met	Gly	Ser	Pro	Gly	Ala	Pro	Cys
			110						115					120
Gln	Lys	Arg	Phe	Phe	Ala	Phe	Ser	Val	Gly	Arg	Lys	Thr	Ala	Leu
			125						130					135
His	Ser	Gly	Glu	Asp	Phe	Gln	Thr	Leu	Leu	Phe	Glu	Arg	Val	Phe
			140						145					150
Val	Asn	Leu	Asp	Gly	Cys	Phe	Asp	Met	Ala	Thr	Gly	Gln	Phe	Ala
			155						160					165
Ala	Pro	Leu	Arg	Gly	Ile	Tyr	Phe	Phe	Ser	Leu	Asn	Val	His	Ser
			170						175					180
Trp	Asn	Tyr	Lys	Glu	Thr	Tyr	Val	His	Ile	Met	His	Asn	Gln	Lys
			185						190					195
Glu	Ala	Val	Ile	Leu	Tyr	Ala	Gln	Pro	Ser	Glu	Arg	Ser	Ile	Met

	200		205		210
Gln Ser Gln Ser Val Met Leu Asp Leu	215	Ala Tyr Gly Asp Arg Val	225		
Trp Val Arg Leu Phe Lys Arg Gln Arg	230	Glu Asn Ala Ile Tyr Ser	240		
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 ccgcctcccg ggacagaaga tgtgtctccag ggtccctctg ctgctgccgc 150  
 tgctcctgct actggccctg gggcctgggg tgcaggcgtg cccatccggc 200  
 tgccagtga gccagccaca gacagtcttc tgcaactgcc gccaggggac 250





attgcgcccc ccctggccgc ggtgctcctg gccgcgctgg ctgcggtggg 1900  
 ggcagccctac tgtgtgcggc gggggcgggc catggcagca gcggctcagg 1950  
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 aaggtccccc ttgagccagg cccgaaggca acagagggcg gtggagagggc 2050  
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 ctggcctcca gtcacccctc cagcacaagc cctacatcta agccagagag 2150  
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<210> 52

<211> 673

<212> FRT

<213> Homo sapiens

<400> 52

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Ser	Gln	Pro	Gln	Thr	Val	Phe	Cys	Thr	Ala	Arg	Gln	Gly	Thr	Thr	
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Val	Pro	Arg	Asp	Val	Pro	Pro	Asp	Thr	Val	Gly	Leu	Tyr	Val	Phe	
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Glu	Asn	Gly	Ile	Thr	Met	Leu	Asp	Ala	Gly	Ser	Phe	Ala	Gly	Leu	
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Pro	Gly	Leu	Gln	Leu	Leu	Asp	Leu	Ser	Gln	Asn	Gln	Ile	Ala	Ser	
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Leu	Pro	Ser	Gly	Val	Phe	Gln	Pro	Leu	Ala	Asn	Leu	Ser	Asn	Leu	
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410					415					420				
His	Leu	Gly	Thr	Arg 425	His	His	Leu	Ala	Cys 430	Leu	Cys	Pro	Glu	Gly 435
Phe	Thr	Gly	Leu	Tyr 440	Cys	Glu	Ser	Gln	Met 445	Gly	Gln	Gly	Thr	Arg 450
Pro	Ser	Pro	Thr	Pro 455	Val	Thr	Pro	Arg	Pro 460	Pro	Arg	Ser	Leu	Thr 465
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Gln	Arg	Tyr	Leu	Gln 485	Gly	Ser	Ser	Val	Gln 490	Leu	Arg	Ser	Leu	Arg 495
Leu	Thr	Tyr	Arg	Asn 500	Leu	Ser	Gly	Pro	Asp 505	Lys	Arg	Leu	Val	Thr 510
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Arg	Pro	Asn	Ala	Thr 530	Tyr	Ser	Val	Cys	Val 535	Met	Pro	Leu	Gly	Pro 540
Gly	Arg	Val	Pro	Glu 545	Gly	Glu	Glu	Ala	Cys 550	Gly	Glu	Ala	His	Thr 555
Pro	Pro	Ala	Val	His 560	Ser	Asn	His	Ala	Pro 565	Val	Thr	Gln	Ala	Arg 570
Glu	Gly	Asn	Leu	Pro 575	Leu	Leu	Ile	Ala	Pro 580	Ala	Leu	Ala	Ala	Val 585
Leu	Leu	Ala	Ala	Leu 590	Ala	Ala	Val	Gly	Ala 595	Ala	Tyr	Cys	Val	Arg 600
Arg	Gly	Arg	Ala	Met 605	Ala	Ala	Ala	Ala	Gln 610	Asp	Lys	Gly	Gln	Val 615
Gly	Pro	Gly	Ala	Gly 620	Pro	Leu	Glu	Leu	Glu 625	Gly	Val	Lys	Val	Pro 630
Leu	Glu	Pro	Gly	Pro 635	Lys	Ala	Thr	Glu	Gly 640	Gly	Gly	Glu	Ala	Leu 645
Pro	Ser	Gly	Ser	Glu 650	Cys	Glu	Val	Pro	Leu 655	Met	Gly	Phe	Pro	Gly 660
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<400> 54  
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 tggaaatata atgagactca tcagaaacat ttacatatatt ttagtagtattg 150  
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 atgaccaact gctccaacat gtctctaaga aaggttcccg cagacttgac 250  
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Met Thr Asn Cys Ser Asn Met Ser Leu Arg Lys Val Pro Ala Asp  
35 40 45  
Leu Thr Pro Ala Thr Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu  
50 55 60  
Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg  
65 70 75  
Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys  
80 85 90

Thr	Phe	Glu	Phe	Asn	Lys	Glu	Leu	Arg	Tyr	Leu	Asp	Leu	Ser	Asn	
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Asn	Arg	Leu	Lys	Ser	Val	Thr	Trp	Tyr	Leu	Leu	Ala	Gly	Leu	Arg	
				110					115					120	
Tyr	Leu	Asp	Leu	Ser	Phe	Asn	Asp	Phe	Asp	Thr	Met	Pro	Ile	Cys	
				125					130					135	
Glu	Glu	Ala	Gly	Asn	Met	Ser	His	Leu	Glu	Ile	Leu	Gly	Leu	Ser	
				140					145					150	
Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu	
				155					160					165	
His	Leu	Asn	Thr	Val	Phe	Leu	Gly	Phe	Arg	Thr	Leu	Pro	His	Tyr	
				170					175					180	
Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile	
				185					190					195	
Val	Leu	Pro	Met	Asp	Thr	Asn	Phe	Trp	Val	Leu	Leu	Arg	Asp	Gly	
				200					205					210	
Ile	Lys	Thr	Ser	Lys	Ile	Leu	Glu	Met	Thr	Asn	Ile	Asp	Gly	Lys	
				215					220					225	
Ser	Gln	Phe	Val	Ser	Tyr	Glu	Met	Gln	Arg	Asn	Leu	Ser	Leu	Glu	
				230					235					240	
Asn	Ala	Lys	Thr	Ser	Val	Leu	Leu	Leu	Asn	Lys	Val	Asp	Leu	Leu	
				245					250					255	
Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser	
				260					265					270	
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala	
				275					280					285	
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg	
				290					295					300	
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln	
				305					310					315	
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn	
				320					325					330	
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn	
				335					340					345	
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu	
				350					355					360	
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys	
				365					370					375	
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val	
				380					385					390	
Ser	Cys	Phe	Ala	Asn	Asn	Thr	Pro	Leu	Glu	His	Leu	Asp	Leu	Ser	
				395					400					405	





Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe	
				725						730				735	
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu	
				740					745					750	
Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly	
				755					760					765	
Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu	
				770					775					780	
Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn	
				785					790					795	
Glu	Glu	Ser	Arg	Gly	Ser	Thr	Ile	Ser	Leu	Met	Arg	Thr	Asp	Cys	
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 <223> Synthetic oligonucleotide probe

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<210> 59  
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 <212> DNA  
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<220>  
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<210> 61  
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 <212> PRT  
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 35 40 45  
 Tyr Tyr Ala Arg Pro Glu Pro Glu Leu Glu Thr Phe Ser Pro Pro  
 50 55 60  
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 65 70 75  
 Pro Arg Pro Pro Lys Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys  
 80 85 90  
 Arg Glu Lys Ser Ala Pro Glu Pro Pro Pro Gly Lys His Ser  
 95 100 105  
 Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala Ala Asn  
 110 115 120  
 Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu Ser  
 125 130 135  
 Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln  
 140 145 150  
 Leu His Ala Ser Thr Val Lys Arg Tyr Gly Leu Gly Ala His Arg  
 155 160 165  
 Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr  
 170 175 180  
 Asp Gly Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile

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Glu	Val	Asp	Ala	Arg	Arg	Leu	Thr	Arg	Phe	Thr	Gly	Val	Ile	Thr
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Gln	Gly	Arg	Asn	Ser	Leu	Trp	Leu	Ser	Asp	Trp	Val	Thr	Ser	Tyr
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Lys	Val	Met	Val	Ser	Asn	Asp	Ser	His	Thr	Trp	Val	Thr	Val	Lys
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				245					250				255	
Ile	Pro	Val	Leu	Asn	Glu	Leu	Pro	Val	Pro	Met	Val	Ala	Arg	Tyr
				260					265				270	
Ile	Arg	Ile	Asn	Pro	Gln	Ser	Trp	Phe	Asp	Asn	Gly	Ser	Ile	Cys
				275					280				285	
Met	Arg	Met	Glu	Ile	Leu	Gly	Cys	Pro	Leu	Pro	Asp	Pro	Asn	Asn
				290					295				300	
Tyr	Tyr	His	Arg	Arg	Asn	Glu	Met	Thr	Thr	Thr	Asp	Asp	Leu	Asp
				305					310				315	
Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	Leu	Met	Lys	Val
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Val	Asn	Glu	Met	Cys	Pro	Asn	Ile	Thr	Arg	Ile	Tyr	Asn	Ile	Gly
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Lys	Ser	His	Gln	Gly	Leu	Lys	Leu	Tyr	Ala	Val	Glu	Ile	Ser	Asp
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His	Pro	Gly	Glu	His	Glu	Val	Gly	Glu	Pro	Glu	Phe	His	Tyr	Ile
				365					370				375	
Ala	Gly	Ala	His	Gly	Asn	Glu	Val	Leu	Gly	Arg	Glu	Leu	Leu	Leu
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Leu	Leu	Val	Gln	Phe	Val	Cys	Gln	Glu	Tyr	Leu	Ala	Arg	Asn	Ala
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Arg	Ile	Val	His	Leu	Val	Glu	Glu	Thr	Arg	Ile	His	Val	Leu	Pro
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Ser	Leu	Asn	Pro	Asp	Gly	Tyr	Glu	Lys	Ala	Tyr	Glu	Gly	Gly	Ser
				425					430				435	
Glu	Leu	Gly	Gly	Trp	Ser	Leu	Gly	Arg	Trp	Thr	His	Asp	Gly	Ile
				440					445				450	
Asp	Ile	Asn	Asn	Asn	Phe	Pro	Asp	Leu	Asn	Thr	Leu	Leu	Trp	Glu
				455					460				465	
Ala	Glu	Asp	Arg	Gln	Asn	Val	Pro	Arg	Lys	Val	Pro	Asn	His	Tyr
				470					475				480	
Ile	Ala	Ile	Pro	Glu	Trp	Phe	Leu	Ser	Glu	Asn	Ala	Thr	Val	Ala
				485					490				495	
Ala	Glu	Thr	Arg	Ala	Val	Ile	Ala	Trp	Met	Glu	Lys	Ile	Pro	Phe



<210> 64  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 64  
cgcgatgtag tggaaactcg gctc 24

<210> 65  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 65  
atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66  
<211> 2854  
<212> DNA  
<213> Homo sapiens

<400> 66  
ctaagaggac aagatgaggc cgggcctctc atttctccta gcccttctgt 50  
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cccagcccg gcttcagctc tttccaggt gttgactcca gctccagctt 150  
cagctccagc tccaggctcg gctccagctc cagccgcagc ttaggcagcg 200  
gaggttctgt gtcccagttg ttttccaatt tcaccggctc cgtggatgac 250  
cgtgggaact gccagtctc tgtttccctg ccagacacca cctttccctg 300  
ggacagagtg gaacgcttg aattcacagc tcatgttctt tctcagaagt 350  
ttgaaaaa actttctaaa gtgagggaat atgtccaatt aattagtgtg 400  
tatgaaaaga aactgttaaa cctaactgtc cgaattgaca tcatggagaa 450  
ggataccatt tottacctg aactggactt cgagctgctc aaggtagaag 500  
tgaaggagat ggaanaactg gtcatacagc tgaaggagag ttttgggtgga 550  
agctcagaaa ttgttgacca gctggaggtg gagataagaa atatgactct 600  
cttggtagag aagcttgaga cactagacaa aaacaatgtc ctggccattc 650  
gccgagaaat cgtggctctg aagaccaagc tgaagagtg ttaggcctct 700  
aaagatcaaa acaccctgt cgtccaccct cctccactc caggagctg 750  
tggtcatggt ggtgtgtgta acatcagcaa accgtctgtg gttcagctca 800  
actggagagg gttttcttat ctatattgtg cttggggtag ggattactct 850  
cccagcatc caaacaaggt actgtattgg gtggcgcat tgaatacaga 900

tggagactg	ttggagtatt	atagactgta	caacacactg	gatgatttgc	950
tattgtatat	aaatgctcga	gagttgcgga	tcacctatgg	coaaggtagt	1000
ggtacagcag	tttacaacaa	caacatgtac	gtcaacatgt	acaacaccgg	1050
gaatatattgc	agagttaacc	tgaccaccaa	cacgattgct	gtgactcaaa	1100
ctctccctaa	tgctgcctat	aataaccgct	tttcatatgc	taatgttgct	1150
tggcaagata	ttgactttgc	tgtggatgag	aatggattgt	gggtatttta	1200
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ccacacttca	ggtgctaaac	acttggtata	ccaagcagta	taaaccatct	1300
gcttctaacg	ccttcatggt	atgtggggtt	ctgtatgcc	ccgtactat	1350
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aagagggcaa	actagacatt	gtaatgcata	agatgcagga	aaaagtgcag	1450
agcattaact	ataacccctt	tgaccagaaa	ctttatgtct	ataacgatgg	1500
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ccacttactt	agatatctgc	agggtgtgct	aaaagtgtgt	tcattttgca	1650
gcaatgttta	ggtgcatagt	tctaccacac	tagagatcta	ggacatttgt	1700
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gggcctagt	aagcctaactg	tgaggaggct	tcactagaag	ccttaaatata	1850
ggaattaag	aacttaaaac	tcagtatggc	gtctagggat	tctttgtaca	1900
ggaaatattg	ccaatgact	agtctccatc	catgtagcac	cactaattct	1950
tccatgcctg	gaagaaacct	ggggacttag	ttaggtagat	taatatctgg	2000
agctcctcga	gggaccaaat	ctccaacttt	tttttccctc	cactagcaac	2050
tggaatgatg	ctttgtatgt	ggcagataag	taaatttggc	atgcttatat	2100
attctacatc	tgtaaagtgc	tgagttttat	ggagagaggc	ctttttatgc	2150
attaaattgt	acatggcaaa	taaattccag	aaggatctgt	agatgaggca	2200
cctgcttttt	cttttctctc	attgtccacc	ttactaaaag	tcagtagaat	2250
cttctacctc	ataacttctc	tccaaaggca	gtcagaaga	ttagaaccag	2300
acttactaac	caattccacc	cccacccaac	ccccttctac	tgctactttt	2350
aaaaaaatta	atagttttct	atggaaactga	tctaagatta	gaaaaattaa	2400
ttttctttaa	tttcattatg	gactttttat	tacatgaact	taagactata	2450
agaaaaatcg	atggcagtg	caaagtgcta	gcattttatt	ttatctaata	2500



aagaccttg agcatatgtg caacttatga gtgtatcagt tgttgcatgt 2550  
aatttttgc tttgtttaag cctggaaactt gtaagaaaaa gaaaatttaa 2600  
tttttttttc taggacgagc tatagaaaag ctattgagag tatctagtta 2650  
atcagtcgag tagttggaaa ccttgctggt gtatgtgatg tgcttctgtg 2700  
cttttgaatg actttatcat ctagtctttg tctatttttc ctttgatgtt 2750  
caagtcctag tctataggat tggcagttta aatgctttac tccccctttt 2800  
aaaataaatg attaaaatgt gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850  
aaaa 2854

<210> 67  
<211> 510  
<212> PRT  
<213> Homo sapiens

<400> 67  
Met Arg Pro Gly Leu Ser Phe Leu Leu Ala Leu Leu Phe Phe Leu  
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Gly Gln Ala Ala Gly Asp Leu Gly Asp Val Gly Pro Pro Ile Pro  
20 25 30  
Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser  
35 40 45  
Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu  
50 55 60  
Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly  
65 70 75  
Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro  
80 85 90  
Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr  
95 100 105  
Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val  
110 115 120  
Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu  
125 130 135  
Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser  
140 145 150  
Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu  
155 160 165  
Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser  
170 175 180  
Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr  
185 190 195  
Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu  
200 205 210

Ala Ile Arg Arg	Glu Ile Val Ala Leu	Lys Thr Lys Leu Lys	Glu
	215	220	225
Cys Glu Ala Ser	Lys Asp Gln Asn Thr	Pro Val Val His Pro	Pro
	230	235	240
Pro Thr Pro Gly	Ser Cys Gly His Gly	Gly Val Val Asn Ile	Ser
	245	250	255
Lys Pro Ser Val	Val Gln Leu Asn Trp	Arg Gly Phe Ser Tyr	Leu
	260	265	270
Tyr Gly Ala Trp	Gly Arg Asp Tyr Ser	Pro Gln His Pro Asn	Lys
	275	280	285
Gly Leu Tyr Trp	Val Ala Pro Leu Asn	Thr Asp Gly Arg Leu	Leu
	290	295	300
Glu Tyr Tyr Arg	Leu Tyr Asn Thr Leu	Asp Asp Leu Leu Leu	Tyr
	305	310	315
Ile Asn Ala Arg	Glu Leu Arg Ile Thr	Tyr Gly Gln Gly Ser	Gly
	320	325	330
Thr Ala Val Tyr	Asn Asn Asn Met Tyr	Val Asn Met Tyr Asn	Thr
	335	340	345
Gly Asn Ile Ala	Arg Val Asn Leu Thr	Thr Asn Thr Ile Ala	Val
	350	355	360
Thr Gln Thr Leu	Pro Asn Ala Ala Tyr	Asn Asn Arg Phe Ser	Tyr
	365	370	375
Ala Asn Val Ala	Trp Gln Asp Ile Asp	Phe Ala Val Asp Glu	Asn
	380	385	390
Gly Leu Trp Val	Ile Tyr Ser Thr Glu	Ala Ser Thr Gly Asn	Met
	395	400	405
Val Ile Ser Lys	Leu Asn Asp Thr Thr	Leu Gln Val Leu Asn	Thr
	410	415	420
Trp Tyr Thr Lys	Gln Tyr Lys Pro Ser	Ala Ser Asn Ala Phe	Met
	425	430	435
Val Cys Gly Val	Leu Tyr Ala Thr Arg	Thr Met Asn Thr Arg	Thr
	440	445	450
Glu Glu Ile Phe	Tyr Tyr Tyr Asp Thr	Asn Thr Gly Lys Glu	Gly
	455	460	465
Lys Leu Asp Ile	Val Met His Lys Met	Gln Glu Lys Val Gln	Ser
	470	475	480
Ile Asn Tyr Asn	Pro Phe Asp Gln Lys	Leu Tyr Val Tyr Asn	Asp
	485	490	495
Gly Tyr Leu Leu	Asn Tyr Asp Leu Ser	Val Leu Gln Lys Pro	Gln
	500	505	510

<210> 68  
 <211> 410  
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

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ggtgaacatc agcaaaccgt ctgtggttca gctcaactgg agagggtttt 150  
cttatctata tgggtccttg ggtagggatt actctcccca gcatccaaac 200  
aaaggnatgt attggngggc gccattgaat acagatggga gactgttggg 250  
gtattataga ctgtacaacc cactggatga tttgctattg tatataaatg 300  
ctcgagagtt gcggatcacc tatggccaag gtagtggtag agcagtttac 350  
aacaacaaca tgtacgtcaa catgtacaac accgggnata ttgccagagt 400  
taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtggtc atgggtgtgt ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctaccttggc cataggtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

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 tggggctgtg ctccatggcg agctggatac catgtttgtg tggaagtgcc 150  
 ccgtgtttgc tatgccgatg ctgtcctagt ggaacaact ccactgtaac 200  
 tagattgac tatgcacttt tottgcttgt tggagtatgt gtagcttgtg 250  
 taatgttgat accaggaatg gaagaacaac tgaataagat tccgtgattt 300  
 tgtgagaatg agaaagggtg tgtcccttgt aacattttgg ttggtataaa 350  
 agctgtatat cgtttgtgct ttggtttggc tatgttctat cttctctctc 400  
 ctttactaat gatcaaagtg aagagtagca gtgatcctag agctgcagtg 450  
 cacaatggat tttggttctt taaatttgct gcagcaattg caattattat 500  
 tggggcattc ttcattccag aaggaaactt tacaactgtg tggttttatg 550  
 taggcattgc aggtgccttt tgtttcatcc tcatacaact agtcttactt 600  
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 agggaaactg agatgttggt atgcagcctt gttatcagct acagctctga 700  
 attatctgct gtctttagtt gctatcgctc tgttctttgt ctactacact 750  
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 cctctgcggt ggtgcttctg taatgtctat actgcaaaa atccaagaat 850  
 cacaaccaag atctggtttg ttacagctct cagtaattac agtctacaca 900  
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 aaatgtatgg ctgccttttg aaatatttga tgtgttgctt gccaggatag 1850  
 tgcaagaagc atggtttatt ttaaaattta taaacaagtc acttaaatgc 1900  
 cagttgtctg aaaaaatctta taaggtttta cccttgatac ggaatttaca 1950  
 caggtaggga gtgttttagt gacaatagtg taggttatgg atggagggtg 2000  
 cgggtactaa ttgaataacg agtaataaat cttactggg tagagatggc 2050  
 ctttgccaac aaagtgaact gttttggttg ttttaaaact atgaagtatg 2100  
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 aaggataatc atgggttaga aggaagtgtt ttgaaagtc ctttgaaagt 2200  
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 cacatggtga acctgttcta taaaaataat ctggctttga gcatacgctt 2350  
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 caaaaaata tataatatatt gaaatcaagg aggcaaaatt ttgacaggga 2500  
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 aatagctcag atagctaatt aggaaatttc aagttggcca ataatagcatt 2650  
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 cctgcttata gtatactaca cagttcaaaa gatgtttaaa atgcttttgt 2850  
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<210> 73  
 <211> 453  
 <212> PRT  
 <213> Homo sapiens

<400> 73

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Cys	Leu	Cys	Gly	Ser	Ala	Pro	Cys	Leu	Leu	Cys	Arg	Cys	Cys	Pro
				20					25					30
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe
				35					40					45
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly
				50					55					60
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu
				65					70					75
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val
				80					85					90
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser
				95					100					105
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala
				110					115					120
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala
				125					130					135
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr
				140					145					150
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu
				155					160					165
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu
				170					175					180
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr
				185					190					195
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu
				200					205					210
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Tyr	Thr	His	Pro	Ala	Ser
				215					220					225
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys
				230					235					240
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser
				245					250					255
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr
				260					265					270
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr
				275					280					285

Asn Cys Asn Pro Ser Leu Leu Ser Ile Ile Gly Tyr Asn Thr Thr  
 290 295 300  
 Ser Thr Val Pro Lys Glu Gly Gln Ser Val Gln Trp Trp His Ala  
 305 310 315  
 Gln Gly Ile Ile Gly Leu Ile Leu Phe Leu Leu Cys Val Phe Tyr  
 320 325 330  
 Ser Ser Ile Arg Thr Ser Asn Asn Ser Gln Val Asn Lys Leu Thr  
 335 340 345  
 Leu Thr Ser Asp Glu Ser Thr Leu Ile Glu Asp Gly Gly Ala Arg  
 350 355 360  
 Ser Asp Gly Ser Leu Glu Asp Gly Asp Val His Arg Ala Val  
 365 370 375  
 Asp Asn Glu Arg Asp Gly Val Thr Tyr Ser Tyr Ser Phe Phe His  
 380 385 390  
 Phe Met Leu Phe Leu Ala Ser Leu Tyr Ile Met Met Thr Leu Thr  
 395 400 405  
 Asn Trp Ser Arg Tyr Glu Pro Ser Arg Glu Met Lys Ser Gln Trp  
 410 415 420  
 Thr Ala Val Trp Val Lys Ile Ser Ser Ser Trp Ile Gly Ile Val  
 425 430 435  
 Leu Tyr Val Trp Thr Leu Val Ala Pro Leu Val Leu Thr Asn Arg  
 440 445 450  
 Asp Phe Asp

<210> 74  
 <211> 480  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 48, 163  
 <223> unknown base

<400> 74  
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 cgttgtggag atgggggagcg tccctggggc tgtgctccat ggcgagctgg 100  
 ataccatgtt tgtgtggaag tgccccgtgt ttgctatgcc gatgctgtcc 150  
 tagtggaac aantccactg taactagatt gatctatgca cttttcttgc 200  
 ttgttgtagt atgtgtagct tgtgtaagt tgataccagg aatggaagaa 250  
 caactgaata agattcctgg attttgtgag aatgagaaag gtgttgtccc 300  
 ttgtaacatt ttggttggt ataaagctgt atatcgtttg tgctttggtt 350  
 tggctatgtt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

agcagtgtatc cttagagctgc agtgacacaat ggatttttgggt tcttttaaatt 450  
tgctgcagca attgcaatta ttattggggc 480

<210> 75  
<211> 438  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323  
<223> unknown base

<400> 75  
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cgagctggat accangtttg tgtggaagtg ccccggtgtt gntatgcga 100  
tgctgtccta gtggaacaa ntccactgta attagattga tntatgcact 150  
tttnttgcct gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200  
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaggt 250  
gttgccctt gtaacatttt ggttggctat aaagctgtat atngtttttg 300  
ctttggttg gctangttct atnttcttct ctctttaacta atgatacaag 350  
tgaagagttag cagtgtatct agagctgcag tgcacaatgg attttggttt 400  
tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76  
<211> 473  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 48  
<223> unknown base

<400> 76  
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gagatgggga gcgtccttgg ggttggtgctc catggcgagc tggataccat 100  
gtttgtgtgg aagtgcctcg tgtttgctat gccgatgtg tccatagtga 150  
aacaactcca ctgtaactag attgatctat gcacttttct tgcttgttgg 200  
agtatgtgta gcttgtgtaa tgttgatacc aggaatggaa gaacaactga 250  
ataagattcc tggattttgt gagaatgaga aaggtgttgt cccttghtaac 300  
attttggttg gctataaagc tgtatatcgt ttgtgctttg gtttggctat 350  
gttctatctt ctctctctt tactaatgat caaagtgaag agtagcagt 400  
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gcaattgcaa ttattattgg ggc 473



<210> 77  
<211> 666  
<212> DNA  
<213> Homo sapiens

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<222> 21, 111  
<223> unknown base

<400> 77  
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caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150  
gaaagggtgtt gtccccttgt aacatttttg gttggctata aagctgtata 200  
tcgtttgtgc tttggtttgg ctatgttcta tcttcttctc tctttactaa 250  
tgatcaaagt gaagagtagc agtgatccta gagctgcagt gcacaatgga 300  
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cttcattcca gaaggaaactt ttacaactgt gtggttttat gtaggcatgg 400  
cagggtgcctt ttgtttcatc ctcatacaac tagtcttact tattgatttt 450  
gcacattcat ggaatgaatc gtggggttga aaaatggaag aagggaactc 500  
gagatgttgg tatgcagcct tgttatcagc tacagctctg aattatctgc 550  
tgtctttagt tgctatcgtc ctgtttcttg tctactacac tcatccagcc 600  
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tggtgcttct gtaatg 666

<210> 78  
<211> 22  
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<220>  
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<400> 78  
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<210> 79  
<211> 18  
<212> DNA  
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<220>  
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<400> 79  
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<210> 80  
<211> 26

<212> DNA  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 80  
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 <210> 81  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 81  
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 <211> 54  
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 gcac 54  
  
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 <213> Homo sapiens  
  
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 cgcgaggctt tcggcaaagg cagtcgagtg tttgcagacc ggggagagtc 150  
  
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 <211> 867  
 <212> PRT  
 <213> Homo sapiens

<400> 84  
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 35 40 45  
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser  
 50 55 60  
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly  
 65 70 75  
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro  
 80 85 90  
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn  
 95 100 105  
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala  
 110 115 120  
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly  
 125 130 135  
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly  
 140 145 150  
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys  
 155 160 165  
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys  
 170 175 180  
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu  
 185 190 195  
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met  
 200 205 210  
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro  
 215 220 225  
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro  
 230 235 240  
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn  
 245 250 255



Pro Glu Asp Gln Asp Asp Lys Asp Gly Gly Asp Phe Ser Gly Thr  
575 580

Gly Gly Leu Pro Asp Tyr Ser Ala Ala Asn Pro Ile Lys Val Thr  
590 595 600

His Arg Cys Tyr Ile Leu Glu Asn Asp Thr Val Gln Cys Asp Leu  
605 610 615

Asp Leu Tyr Lys Ser Leu Gln Ala Trp Lys Asp His Lys Leu His  
620 625 630

Ile Asp His Glu Ile Glu Thr Leu Gln Asn Lys Ile Lys Asn Leu  
635 640 645

Arg Glu Val Arg Gly His Leu Lys Lys Lys Arg Pro Glu Glu Cys  
650 655 660

Asp Cys His Lys Ile Ser Tyr His Thr Gln His Lys Gly Arg Leu  
665 670 675

Lys His Arg Gly Ser Ser Leu His Pro Phe Arg Lys Gly Leu Gln  
680 685 690

Glu Lys Asp Lys Val Trp Leu Leu Arg Glu Gln Lys Arg Lys Lys  
695 700 705

Lys Leu Arg Lys Leu Leu Lys Arg Leu Gln Asn Asn Asp Thr Cys  
710 715 720

Ser Met Pro Gly Leu Thr Cys Phe Thr His Asp Asn Gln His Trp  
725 730 735

Gln Thr Ala Pro Phe Trp Thr Leu Gly Pro Phe Cys Ala Cys Thr  
740 745 750

Ser Ala Asn Asn Asn Thr Tyr Trp Cys Met Arg Thr Ile Asn Glu  
755 760 765

Thr His Asn Phe Leu Phe Cys Glu Phe Ala Thr Gly Phe Leu Glu  
770 775 780

Tyr Phe Asp Leu Asn Thr Asp Pro Tyr Gln Leu Met Asn Ala Val  
785 790 795

Asn Thr Leu Asp Arg Asp Val Leu Asn Gln Leu His Val Gln Leu  
800 805 810

Met Glu Leu Arg Ser Cys Lys Gly Tyr Lys Gln Cys Asn Pro Arg  
815 820 825

Thr Arg Asn Met Asp Leu Asp Gly Gly Ser Tyr Glu Gln Tyr Arg  
830 835 840

Gln Phe Gln Arg Arg Lys Trp Pro Glu Met Lys Arg Pro Ser Ser  
845 850 855

Lys Ser Leu Gly Gln Leu Trp Glu Gly Trp Glu Gly  
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 <210> 86  
 <211> 18  
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 <220>  
 <223> Synthetic oligonucleotide probe  
 <400> 86  
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 <210> 87  
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 <223> Synthetic oligonucleotide probe  
 <400> 87  
 aagggcctgc aagagaag 18  
 <210> 88  
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 cactgggaca actgtggg 18  
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 <223> Synthetic oligonucleotide probe  
 <400> 89  
 cagaggcaac gtggagag 18  
 <210> 90  
 <211> 21  
 <212> DNA  
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 <223> Synthetic oligonucleotide probe  
 <400> 90  
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<210> 91  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 91  
tagtacttgg gcacgaggtt ggag 24

<210> 92  
<211> 24  
<212> DNA  
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<400> 92  
tcataccaac tgctggtcat tggc 24

<210> 93  
<211> 45  
<212> DNA  
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<400> 93  
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<210> 94  
<211> 971  
<212> DNA  
<213> Homo sapiens

<400> 94  
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tgggcctcct ggggagcaca gccctcgtgg gatggatcac aggtgctgct 150  
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tgtgcgggt gcctgtggac agcagctgcc cctgcctcc catctgttcc 500  
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 ccctgagaat gtcttttgg tttggagaag gcagtgtgag gctgcacagt 900  
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 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95  
 <211> 115  
 <212> PRT  
 <213> Homo sapiens

<400> 95  
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 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg  
 35 40 45  
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro  
 50 55 60  
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His  
 65 70 75  
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His  
 80 85 90  
 His His Pro Arg His Thr Pro His His Leu His His His His His  
 95 100 105  
 Pro His Arg His His Pro Arg His Ala Arg  
 110 115

<210> 96  
 <211> 1312  
 <212> DNA  
 <213> Homo sapiens

<400> 96  
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 aaaaaaaaaa aa 1312

<210> 97  
 <211> 313  
 <212> PRT  
 <213> Homo sapiens

<400> 97  
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 35 40 45  
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr  
 50 55 60  
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg  
 65 70 75

Ser Ile Ala Val Tyr Tyr Asp Asn Pro His Met Val Pro Pro Asp  
 80 85 90  
 Lys Cys Arg Cys Ala Val Gly Ser Ile Leu Ser Glu Gly Glu Glu  
 95 100 105  
 Ser Pro Ser Pro Glu Leu Ile Asp Leu Tyr Gln Lys Phe Gly Phe  
 110 115 120  
 Lys Val Phe Ser Phe Pro Ala Pro Ser His Val Val Thr Ala Thr  
 125 130 135  
 Phe Pro Tyr Thr Thr Ile Leu Ser Ile Trp Leu Ala Thr Arg Arg  
 140 145 150  
 Val His Pro Ala Leu Asp Thr Tyr Ile Lys Glu Arg Lys Leu Cys  
 155 160 165  
 Ala Tyr Pro Arg Leu Glu Ile Tyr Gln Glu Asp Gln Ile His Phe  
 170 175 180  
 Met Cys Pro Leu Ala Arg Gln Gly Asp Phe Tyr Val Pro Glu Met  
 185 190 195  
 Lys Glu Thr Glu Trp Lys Trp Arg Gly Leu Val Glu Ala Ile Asp  
 200 205 210  
 Thr Gln Val Asp Gly Thr Gly Ala Asp Thr Met Ser Asp Thr Ser  
 215 220 225  
 Ser Val Ser Leu Glu Val Ser Pro Gly Ser Arg Glu Thr Ser Ala  
 230 235 240  
 Ala Thr Leu Ser Pro Gly Ala Ser Ser Arg Gly Trp Asp Asp Gly  
 245 250 255  
 Asp Thr Arg Ser Glu His Ser Tyr Ser Glu Ser Gly Ala Ser Gly  
 260 265 270  
 Ser Ser Phe Glu Glu Leu Asp Leu Glu Gly Glu Gly Pro Leu Gly  
 275 280 285  
 Glu Ser Arg Leu Asp Pro Gly Thr Glu Pro Leu Gly Thr Thr Lys  
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<210> 98

<211> 725

<212> DNA

<213> Homo sapiens

<400> 98

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 ctgaggtctg gctcgaaacc gaaagtcgcc tccggaccct ccaagtggag 200  
 accctggtgg agccccaga accatgtgcc gagccccgtg cttttggaga 250

cacgcttcac atacactaca cggaagcctt gtagatgga cgtattattg 300  
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 tctggtaggg atggccatgg tgccagccct cctgggcctc attgggtatc 600  
 acctatacag aaaggccaat agaccctaaag tctccaaaaa gaagctcaag 650  
 gaagagaac gaaacaagag caaaaagaaa taataataa taaattttaa 700  
 aaaacttaaa aaaaaaaaaa aaaaa 725

<210> 99  
 <211> 201  
 <212> PRT  
 <213> Homo sapiens

<400> 99  
 Met Thr Leu Arg Pro Ser Leu Leu Pro Leu His Leu Leu Leu Leu  
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 Leu Leu Leu Ser Ala Ala Val Cys Arg Ala Glu Ala Gly Leu Glu  
 20 25 30  
 Thr Glu Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu  
 35 40 45  
 Pro Pro Glu Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu  
 50 55 60  
 His Ile His Tyr Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp  
 65 70 75  
 Thr Ser Leu Thr Arg Asp Pro Leu Val Ile Glu Leu Gly Gln Lys  
 80 85 90  
 Gln Val Ile Pro Gly Leu Glu Gln Ser Leu Leu Asp Met Cys Val  
 95 100 105  
 Gly Glu Lys Arg Arg Ala Ile Ile Pro Ser His Leu Ala Tyr Gly  
 110 115 120  
 Lys Arg Gly Phe Pro Pro Ser Val Pro Ala Asp Ala Val Val Gln  
 125 130 135  
 Tyr Asp Val Glu Leu Ile Ala Leu Ile Arg Ala Asn Tyr Trp Leu  
 140 145 150  
 Lys Leu Val Lys Gly Ile Leu Pro Leu Val Gly Met Ala Met Val  
 155 160 165  
 Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu Tyr Arg Lys Ala  
 170 175 180  
 Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu Glu Lys Arg

Asn Lys Ser Lys Lys Lys  
200

<210> 100  
<211> 705  
<212> DNA  
<213> Homo sapiens

<400> 100  
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cgctccatct gctgctgctg ctgctgctca gtgcggcggt gtgcggggct 150  
gaggctgggc tcgaaccga aagtcctgct cggaccctcc aagtggagac 200  
cctggtggag cccccagAAC catgtgccga gcccgctgct tttggagaca 250  
cgcttcacat acactacacg ggaagcttgg tagatggagc tattattgac 300  
acctccctga ccagagaccc tctggttata gaacttgccc aaaagcaggt 350  
gattccaggt ctggagcaga gtcttctcga catgtgtgtg ggagagaagc 400  
gaagggcaat cattccttct cacttggcct atggaaaacg gggatttcca 450  
ccatctgtcc cagcggatgc agtggtgcag tatgacgtgg agctgattgc 500  
actaatccga gccaaactact ggctaaagct ggtgaagggc attttgcctc 550  
tggtagggat ggccatggtg ccaccctcct gggcctcatt gggatcacc 600  
tatacagaaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650  
gagaaacgaa acaagagcaa aaagaaataa taaataataa attttaaaaa 700  
actta 705

<210> 101  
<211> 543  
<212> DNA  
<213> Homo sapiens

<400> 101  
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gaaccatgtg ccgagcccg cgtcttttga gacacgcttc acatacacta 100  
cacgggaagc ttggtagatg gacgtattat tgacacctcc ctgaccagag 150  
accctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200  
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggg caatcattcc 250  
ttctcacttg gcctatggaa aacggggatt tccaccatct gtcccagcgg 300  
atgcagtggg gcagtatgac gtggagctga ttgcaactaa ccgagccaac 350  
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

ggtgccagcc ctccctgggcc tcattgggta tcacctatac agaaaggcca 450  
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaacaag 500  
 agcaaaaaga aataataaat aataaat tttt aaaaaactta aaa 543

<210> 102  
 <211> 1316  
 <212> DNA  
 <213> Homo sapiens

<400> 102  
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 ccaatgcacg acgggggttg actgacctga aaaaaatgtc tggatttcta 150  
 gagggcttga gatgctcaga atgcattgac tggggggaaa agcgaatac 200  
 tattgcttcc attgctgctg gtgtactatt tttacaggc tgggtggatta 250  
 tcatagatgc agctgttatt tatcccacca tgaaagattt caaccactca 300  
 taccatgcct gtggtgttat agcaaccata gccttcccta tgattaatgc 350  
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 gtcaaacagg tgctcgcat tggcttttcg ttggtttcat gttggccttt 450  
 ggatctctga ttgcatctat gtggattcct tttggaggtt atgttgctaa 500  
 agaaaaagac atagtatacc ctggaattgc tgtatttttc cagaatgcct 550  
 tcatcttttt tggagggtcg gtttttaagt ttggccgcac tgaagactta 600  
 tggcagtga ccatctgat ttcccacagc acaacagccc tgcagtgggt 650  
 tgtttgtttt ttactgctc actccaacc ttttgtaatg ccattttcta 700  
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 acgagaacac ctaaaaca accaaaaatc tatttggtta tgcacttgat 800  
 taacttataa aatgttagag gaaactttca catgaataa ttttgtaaaa 850  
 ttttatcatg gtataatttg taaaaataa aagaaattac aaaagaatt 900  
 atggatttgt caatgtaagt atttgcata tctgaggtcc aaaaccacaa 950  
 tgaaagtgtc ctgaagattt aatgtgttta ttcaaatgtg gtctcttctg 1000  
 tgtcaaatgt taaatgaaat ataaacattt tttagttttt aaaaatttcc 1050  
 gtggtcaaaa ttcttcctca ctataatttg tatttacttt taccaaaaat 1100  
 totgtgaaca tgtaatgtaa ctggcttttg aggggtctcc aagggtgtgag 1150  
 tggacgtgtt ggaagagaga agcaccatgg tccagccacc aggtccctg 1200  
 tgtcccttcc atgggaaggt ctccgctgt gccctcatt ccaagggcag 1250  
 gaagatgtga ctacgcatg acacgtgggt ctgggtggat gcacagtcac 1300

tcacatcca ccaactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

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Trp	Gly	Glu	Lys	Arg	Asn	Thr	Ile	Ala	Ser	Ile	Ala	Ala	Gly	Val
			20					25					30	
Leu	Phe	Phe	Thr	Gly	Trp	Trp	Ile	Ile	Ile	Asp	Ala	Ala	Val	Ile
			35					40					45	
Tyr	Pro	Thr	Met	Lys	Asp	Phe	Asn	His	Ser	Tyr	His	Ala	Cys	Gly
			50					55					60	
Val	Ile	Ala	Thr	Ile	Ala	Phe	Leu	Met	Ile	Asn	Ala	Val	Ser	Asn
			65					70					75	
Gly	Gln	Val	Arg	Gly	Asp	Ser	Tyr	Ser	Glu	Gly	Cys	Leu	Gly	Gln
			80					85					90	
Thr	Gly	Ala	Arg	Ile	Trp	Leu	Phe	Val	Gly	Phe	Met	Leu	Ala	Phe
			95					100					105	
Gly	Ser	Leu	Ile	Ala	Ser	Met	Trp	Ile	Leu	Phe	Gly	Gly	Tyr	Val
			110					115					120	
Ala	Lys	Glu	Lys	Asp	Ile	Val	Tyr	Pro	Gly	Ile	Ala	Val	Phe	Phe
			125					130					135	
Gln	Asn	Ala	Phe	Ile	Phe	Phe	Gly	Gly	Leu	Val	Phe	Lys	Phe	Gly
			140					145					150	
Arg	Thr	Glu	Asp	Leu	Trp	Gln								
			155											

<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

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tggaattcta gagggcttga gatgctcaga atgcattgac tggggggaaa 150  
agcgcataac tattgcttcc attgctgctg gtgtactatt ttttacaggc 200  
tggtggatta tcatagatgc agctgttatt tatoccacca tgaaagattt 250  
caaccactoa taccatgcct gtggtgttat agcaaccata gccttcttaa 300  
tgattaatgc agtatcgaat ggacaagtcc gaggtgatag ttacagttaa 350  
ggttgtctgg gtcaaacagg tgctgcatt tggcttttcg ttggtttcat 400



gttggccttt ggatctctga ttgcctctat gtggattctt tttggaggtt 450  
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 cagaatgctt tcattctttt tggagggtcg gtttttaagt ttggc 545

<210> 105  
 <211> 490  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 31, 39, 108, 145, 179, 219, 412, 479  
 <223> unknown base

<400> 105  
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 agaatgcatt actgggggaa aagcgcaaat actattgctt ccattgctgc 100  
 tgggtanta ttttttacag gctggtggat tatcatagat gcagntgtta 150  
 tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200  
 atagcaacca tagccttctt aatgattaat gcagtatcga atggacaagt 250  
 ccgaggtgat agttacagtg aagggtgttt gggccaaca ggtgctcgca 300  
 tttgctcttt cgttgggttc atgttggcct ttggtctctt gattgcatct 350  
 atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 400  
 ccctggaatt gntgtatttt tccagaatgc cttcatcttt tttggagggc 450  
 tggtttttaa gtttggccgc actgaagant tatggcagtg 490

<210> 106  
 <211> 466  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 26, 38, 81, 115, 207, 329, 380, 446, 449  
 <223> unknown base

<400> 106  
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 ggaaaagcgc aatantattg ctttccattg ctgctggtgt actatttttt 150  
 acaggttggt ggattatcat agatgcagct gttatttato ccaccatgaa 200  
 agatttnaac cactcatacc atgcctgtgg tgttatagca accatagcct 250  
 tcctaattgat taatgcagta tcgaatggac aagtcgagg tgatagttac 300  
 agtgaaggtt gtttgggtca aacaggtgnt cgcatttggc ttttcgttgg 350  
 tttcatgttg gcctttggat ttctgattgn attctatgag gattcttctt 400



tg 552

<210> 109  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 109  
gggtggatgg tactgctgca tcc 23

<210> 110  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 110  
tgttgtgctg tgggaatca gatgtg 26

<210> 111  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 111  
gtgtctggag gctgtggcgg tttgttttc ttgggctaaa atcggg 46

<210> 112  
<211> 3004  
<212> DNA  
<213> Homo sapiens

<400> 112  
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ccgaatcctt tctccgaaga tgtcaaacgg cccccagcgc ccttggtaac 150  
tgacaaggag gccaggaaga aggttctcaa acaagctttt tcagccaacc 200  
aagtgccgga gaagctggat gtggtggtaa ttggcagtgg ctttgggggc 250  
ctggctgcag ctgcaattct agctaaagct ggcaagcgag tcttggtgct 300  
ggaacaacat accaaggcag ggggctgctg tcataacctt ggaagaatg 350  
gccttgaatt tgacacagga atccattaca ttgggcgtat ggaagagggc 400  
agcattggcc gttttatctt ggaccagatc actgaagggc agctggactg 450  
ggctccctctg tcctctcctt ttgacatcat ggtactggaa gggcccaatg 500  
gccgaaagga gtaccccatg tacagtggag agaaagccta cattcagggc 550









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tatgatgaat gtacatcaga tgggagggaa gatggcagac tgtggtgtgc 550  
tacaacctat gactacaaag cagatgaaaa gtggggcctt tgtgaaactg 600  
aagaagagcg tgctaagaga cggcagatgc aggaagcaga aatgatgtat 650  
caaaactggaa tgaataatcct taatggaagc aataagaaaa gccaaaaaag 700  
agaagcatat cggatatctc aaaaggcagc aagcatgaac cataccaaaag 750  
ccctggagag agtgtcatat gctcttttat ttggtgatta cttgccacag 800  
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a 1701

<210> 115

<211> 301

<212> PRT

<213> Homo sapiens

<400> 115

Met Arg Val Arg Ile Gly Leu Thr Leu Leu Leu Cys Ala Val Leu  
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Leu Ser Leu Ala Ser Ala Ser Ser Asp Glu Glu Gly Ser Gln Asp  
20 25 30



Glu Ser Leu Asp Ser Lys Thr Thr Leu Thr Ser Asp Glu Ser Val  
 35 40 45  
 Lys Asp His Thr Thr Ala Gly Arg Val Val Ala Gly Gln Ile Phe  
 50 55 60  
 Leu Asp Ser Glu Glu Ser Glu Leu Glu Ser Ser Ile Gln Glu Glu  
 65 70 75  
 Glu Asp Ser Leu Lys Ser Gln Glu Gly Glu Ser Val Thr Glu Asp  
 80 85 90  
 Ile Ser Phe Leu Glu Ser Pro Asn Pro Glu Asn Lys Asp Tyr Glu  
 95 100 105  
 Glu Pro Lys Lys Val Arg Lys Pro Ala Leu Thr Ala Ile Glu Gly  
 110 115 120  
 Thr Ala His Gly Glu Pro Cys His Phe Pro Phe Leu Phe Leu Asp  
 125 130 135  
 Lys Glu Tyr Asp Glu Cys Thr Ser Asp Gly Arg Glu Asp Gly Arg  
 140 145 150  
 Leu Trp Cys Ala Thr Thr Tyr Asp Tyr Lys Ala Asp Glu Lys Trp  
 155 160 165  
 Gly Phe Cys Glu Thr Thr Glu Glu Glu Ala Ala Lys Arg Arg Gln Met  
 170 175 180  
 Gln Glu Ala Glu Met Met Tyr Gln Thr Gly Met Lys Ile Leu Asn  
 185 190 195  
 Gly Ser Asn Lys Lys Ser Gln Lys Arg Glu Ala Tyr Arg Tyr Leu  
 200 210  
 Gln Lys Ala Ala Ser Met Asn His Thr Lys Ala Leu Glu Arg Val  
 215 220 225  
 Ser Tyr Ala Leu Leu Phe Gly Asp Tyr Leu Pro Gln Asn Ile Gln  
 230 235 240  
 Ala Ala Arg Glu Met Phe Glu Lys Leu Thr Glu Glu Gly Ser Pro  
 245 250 255  
 Lys Gly Gln Thr Ala Leu Gly Phe Leu Tyr Ala Ser Gly Leu Gly  
 260 265 270  
 Val Asn Ser Ser Gln Ala Lys Ala Leu Val Tyr Tyr Thr Phe Gly  
 275 280 285  
 Ala Leu Gly Gly Asn Leu Ile Ala His Met Val Leu Val Ser Arg  
 290 295 300  
 Leu

<210> 116  
 <211> 584  
 <212> DNA  
 <213> Homo sapiens  
 <400> 116

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 aaggatgagg ccacaaatgc ctgtgtcctc accattatgc ccgtgcagcc 400  
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 aggggtgggg tgtgagatgg gtgcctcccc tctgcctccc atttctgccc 500  
 ctgacottgg gtccttttta aactttctct gagccttgct tcccctctgt 550  
 aaaatggggt aataatattc aacatgtcaa caac 584

<210> 117  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

<400> 117  
 Met Ala Cys Arg Cys 5 Leu Ser Phe Leu Leu Met Gly Thr Phe Leu 15  
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 Phe Pro Gly Gln Val 35 Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln 45  
 40  
 His Val Thr Ile Arg 50 Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg 60  
 55  
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu 75  
 65  
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala 90  
 80 85  
 Lys Asp Glu Ala 95 Asn Ala Cys Val Leu Thr Ile Ser Pro Val 105  
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 Gln Pro Glu Asp 110 Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly 120  
 115 120  
 Phe Ser Pro

<210> 118  
 <211> 3402  
 <212> DNA  
 <213> Homo sapiens

<400> 118

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ccccgcgcc	cgcccgctga	gccccccgcc	gaggctcgga	caggccgaga	150
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gcccagtgga	gggggaccgc	ccgcgcgtga	ccatgtggac	caaggatggc	350
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caaggtggat	gtgatccagc	ggccccgttc	caagcccgctg	ctcacaggca	900
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tgcaaggtgc	gcagcgacgt	gaagcccggtg	atccagtggc	tgaagcgcgt	1000
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agaagtttgt	ggtgctgcc	acgggtgacg	tgtggtcgcg	gcccagcgcc	1100
tctacacctc	ataagctgtc	catcacccgt	gcccgccagg	acgatcgggg	1150
catgtacatc	tgccttggcg	ccaacaccat	gggtacagc	tccgcagcg	1200
ccttctctac	cgtgctgcca	gacccaaaa	cgccagggcc	acctgtggcc	1250
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ggtctccgca	agccccccag	cacttactgtg	gccaggcccc	agttgtctgc	1550
cctaagttgt	accccaaaact	ctacacagac	atccacacac	acacacacac	1600





Arg Thr Arg Ser Lys Pro Val Leu Thr Gly Thr His Pro Val Asn  
245 250

Thr Thr Val Asp Phe Gly Gly Thr Thr Ser Phe Gln Cys Lys Val  
260 265 270

Arg Ser Asp Val Lys Pro Val Ile Gln Trp Leu Lys Arg Val Glu  
275 280 285

Tyr Gly Ala Glu Gly Arg His Asn Ser Thr Ile Asp Val Gly Gly  
290 295 300

Gln Lys Phe Val Val Leu Pro Thr Gly Asp Val Trp Ser Arg Pro  
305 310 315

Asp Gly Ser Tyr Leu Asn Lys Leu Leu Ile Thr Arg Ala Arg Gln  
320 325 330

Asp Asp Ala Gly Met Tyr Ile Cys Leu Gly Ala Asn Thr Met Gly  
335 340 345

Tyr Ser Phe Arg Ser Ala Phe Leu Thr Val Leu Pro Asp Pro Lys  
350 355 360

Pro Pro Gly Pro Pro Val Ala Ser Ser Ser Ser Ala Thr Ser Leu  
365 370 375

Pro Trp Pro Val Val Ile Gly Ile Pro Ala Gly Ala Val Phe Ile  
380 385 390

Leu Gly Thr Leu Leu Leu Trp Leu Cys Gln Ala Gln Lys Lys Pro  
395 400 405

Cys Thr Pro Ala Pro Ala Pro Pro Leu Pro Gly His Arg Pro Pro  
410 415 420

Gly Thr Ala Arg Asp Arg Ser Gly Asp Lys Asp Leu Pro Ser Leu  
425 430 435

Ala Ala Leu Ser Ala Gly Pro Gly Val Gly Leu Cys Glu Glu His  
440 445 450

Gly Ser Pro Ala Ala Pro Gln His Leu Leu Gly Pro Gly Pro Val  
455 460 465

Ala Gly Pro Lys Leu Tyr Pro Lys Leu Tyr Thr Asp Ile His Thr  
470 475 480

His Thr His Thr His Ser His Thr His Ser His Val Glu Gly Lys  
485 490 495

Val His Gln His Ile His Tyr Gln Cys  
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<210> 120

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

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<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

cggttcgaca cgcggcaggt g 21

<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

tgctgctcct gctgccgcg ctgctgctgg gggccttccc gcgcg 45

<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

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 <212> PRT  
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 Pro Ala Asp Thr Leu Glu Ser Pro Gly Glu Trp Thr Thr Trp Phe  
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 Asn Ile Asp Tyr Pro Gly Gly Lys Gly Asp Tyr Glu Arg Leu Asp  
 65 70 75  
 Ala Ile Arg Phe Tyr Tyr Gly Asp Arg Val Cys Ala Arg Pro Leu  
 80 85 90  
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 Gly Gln Val Val His Gly Ser Pro Arg Glu Gly Phe Trp Cys Leu  
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 Asn Arg Glu Gln Arg Pro Gly Gln Asn Cys Ser Asn Tyr Thr Val  
 125 130 135  
 Arg Phe Leu Cys Pro Pro Gly Ser Leu Arg Arg Asp Thr Glu Arg  
 140 145 150  
 Ile Trp Ser Pro Trp Ser Pro Trp Ser Lys Cys Ser Ala Ala Cys  
 155 160 165  
 Gly Gln Thr Gly Val Gln Thr Arg Thr Arg Ile Cys Leu Ala Glu  
 170 175 180  
 Met Val Ser Leu Cys Ser Glu Ala Ser Glu Glu Gly Gln His Cys  
 185 190 195  
 Met Gly Gln Asp Cys Thr Ala Cys Asp Leu Thr Cys Pro Met Gly  
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Leu	His	Gly	Ala	Val	Ser	Leu	Pro	Gly	Gly	Ala	Pro	Ala	Ser	Gly
				230					235					240
Ala	Ala	Ile	Tyr	Leu	Leu	Thr	Lys	Thr	Pro	Lys	Leu	Leu	Thr	Gln
				245					250					255
Thr	Asp	Ser	Asp	Gly	Arg	Phe	Arg	Ile	Pro	Gly	Leu	Cys	Pro	Asp
				260					265					270
Gly	Lys	Ser	Ile	Leu	Lys	Ile	Thr	Lys	Val	Lys	Phe	Ala	Pro	Ile
				275					280					285
Val	Leu	Thr	Met	Pro	Lys	Thr	Ser	Leu	Lys	Ala	Ala	Thr	Ile	Lys
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Ala	Glu	Phe	Val	Arg	Ala	Glu	Thr	Pro	Tyr	Met	Val	Met	Asn	Pro
				305					310					315
Glu	Thr	Lys	Ala	Arg	Arg	Ala	Gly	Gln	Ser	Val	Ser	Leu	Cys	Cys
				320					325					330
Lys	Ala	Thr	Gly	Lys	Pro	Arg	Pro	Asp	Lys	Tyr	Phe	Trp	Tyr	His
				335					340					345
Asn	Asp	Thr	Leu	Leu	Asp	Pro	Ser	Leu	Tyr	Lys	His	Glu	Ser	Lys
				350					355					360
Leu	Val	Leu	Arg	Lys	Leu	Gln	Gln	His	Gln	Ala	Gly	Glu	Tyr	Phe
				365					370					375
Cys	Lys	Ala	Gln	Ser	Asp	Ala	Gly	Ala	Val	Lys	Ser	Lys	Val	Ala
				380					385					390
Gln	Leu	Ile	Val	Thr	Ala	Ser	Asp	Glu	Thr	Pro	Cys	Asn	Pro	Val
				395					400					405
Pro	Glu	Ser	Tyr	Leu	Ile	Arg	Leu	Pro	His	Asp	Cys	Phe	Gln	Asn
				410					415					420
Ala	Thr	Asn	Ser	Phe	Tyr	Tyr	Asp	Val	Gly	Arg	Cys	Pro	Val	Lys
				425					430					435
Thr	Cys	Ala	Gly	Gln	Gln	Asp	Asn	Gly	Ile	Arg	Cys	Arg	Asp	Ala
				440					445					450
Val	Gln	Asn	Cys	Cys	Gly	Ile	Ser	Lys	Thr	Glu	Glu	Arg	Glu	Ile
				455					460					465
Gln	Cys	Ser	Gly	Tyr	Thr	Leu	Pro	Thr	Lys	Val	Ala	Lys	Glu	Cys
				470					475					480
Ser	Cys	Gln	Arg	Cys	Thr	Glu	Thr	Arg	Ser	Ile	Val	Arg	Gly	Arg
				485					490					495
Val	Ser	Ala	Ala	Asp	Asn	Gly	Glu	Pro	Met	Arg	Phe	Gly	His	Val
				500					505					510
Tyr	Met	Gly	Asn	Ser	Arg	Val	Ser	Met	Thr	Gly	Tyr	Lys	Gly	Thr
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Phe Thr Leu His	Val Pro Gln Asp Thr	Glu Arg Leu Val Leu Thr
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Phe Val Asp Arg	Leu Gln Lys Phe Val	Asn Thr Thr Lys Val Leu
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Pro Phe Asn Lys	Lys Gly Ser Ala Val	Phe His Glu Ile Lys Met
560		565 570
Leu Arg Arg Lys	Glu Pro Ile Thr Leu	Glu Ala Met Glu Thr Asn
575		580 585
Ile Ile Pro Leu	Gly Glu Val Val Gly	Glu Asp Pro Met Ala Glu
590		595 600
Leu Glu Ile Pro	Ser Arg Ser Phe Tyr	Arg Gln Asn Gly Glu Pro
605		610 615
Tyr Ile Gly Lys	Val Lys Ala Ser Val	Thr Phe Leu Asp Pro Arg
620		625 630
Asn Ile Ser Thr	Ala Thr Ala Ala Gln	Thr Asp Leu Asn Phe Ile
635		640 645
Asn Asp Glu Gly	Asp Thr Phe Pro Leu	Arg Thr Tyr Gly Met Phe
650		655 660
Ser Val Asp Phe	Arg Asp Glu Val Thr	Ser Glu Pro Leu Asn Ala
665		670 675
Gly Lys Val Lys	Val His Leu Asp Ser	Thr Gln Val Lys Met Pro
680		685 690
Glu His Ile Ser	Thr Val Lys Leu Trp	Ser Leu Asn Pro Asp Thr
695		700 705
Gly Leu Trp Glu	Glu Glu Gly Asp Phe	Lys Phe Glu Asn Gln Arg
710		715 720
Arg Asn Lys Arg	Glu Asp Arg Thr Phe	Leu Val Gly Asn Leu Glu
725		730 735
Ile Arg Glu Arg	Arg Leu Phe Asn Leu	Asp Val Pro Glu Ser Arg
740		745 750
Arg Cys Phe Val	Lys Val Arg Ala Tyr	Arg Ser Glu Arg Phe Leu
755		760 765
Pro Ser Glu Gln	Ile Gln Gly Val Val	Ile Ser Val Ile Asn Leu
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Glu Pro Arg Thr	Gly Phe Leu Ser Asn	Pro Arg Ala Trp Gly Arg
785		790 795
Phe Asp Ser Val	Ile Thr Gly Pro Asn	Gly Ala Cys Val Pro Ala
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Ala Ser Leu Ala	Gly Glu Glu Leu Gln	Ala Val Glu Ser Ser Pro
830		835 840

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 Lys Leu Asn Tyr Arg Arg Thr Asp His Glu Asp Pro Arg Val Lys  
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 Lys Thr Ala Phe Gln Ile Ser Met Ala Lys Pro Arg Pro Asn Ser  
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 Glu Asp Asp Pro Met Ser Trp Thr Glu Asp Tyr Leu Ala Trp Trp  
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 Pro Lys Pro Met Glu Phe Arg Ala Cys Tyr Ile Lys Val Lys Ile  
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 Arg Ser Thr Arg Asp Arg Asp Gln Pro Asn Val Ser Ala Ala Cys  
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<223> Synthetic oligonucleotide probe

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<211> 2819

<212> DNA

<213> Homo sapiens

<400> 128

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 35 40 45  
 Asp Tyr Met Ala Cys Gln Pro Glu Ser Thr Asp Met Thr Lys Tyr  
 50 55 60  
 Leu Lys Val Lys Leu Asp Pro Pro Asp Ile Thr Cys Gly Asp Pro  
 65 70 75  
 Pro Glu Thr Phe Cys Ala Met Gly Asn Pro Tyr Met Cys Asn Asn  
 80 85 90  
 Glu Cys Asp Ala Ser Thr Pro Glu Leu Ala His Pro Pro Glu Leu  
 95 100 105  
 Met Phe Asp Phe Glu Gly Arg His Pro Ser Thr Phe Trp Gln Ser  
 110 115 120  
 Ala Thr Trp Lys Glu Tyr Pro Lys Pro Leu Gln Val Asn Ile Thr



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Thr Phe Glu Ser Gly Arg Pro Asp Gln	Met Ile Leu Glu Lys Ser	
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Leu Asp Tyr Gly Arg Thr Trp Gln Pro	Tyr Gln Tyr Tyr Ala Thr	
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Asp Cys Leu Asp Ala Phe His Met Asp	Pro Lys Ser Val Lys Asp	
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Leu Ser Gln His Thr Val Leu Glu Ile	Ile Cys Thr Glu Glu Tyr	
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Ser Thr Gly Tyr Thr Thr Asn Ser Lys	Ile Ile His Phe Glu Ile	
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Tyr Ala Ile Ser Asp Ile Lys Val Arg	Gly Arg Cys Lys Cys Asn	
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Leu His Ala Thr Val Cys Val Tyr Asp	Asn Ser Lys Leu Thr Cys	
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Glu Cys Glu His Asn Thr Thr Gly Pro	Asp Cys Gly Lys Cys Lys	
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Lys Asn Tyr Gln Gly Arg Pro Trp Ser	Pro Gly Ser Tyr Leu Pro	
335	340	345
Ile Pro Lys Gly Thr Ala Asn Thr Cys	Ile Pro Ser Ile Ser Ser	
350	355	360
Ile Gly Thr Asn Val Cys Asp Asn Glu	Leu Leu His Cys Gln Asn	
365	370	375
Gly Gly Thr Cys His Asn Asn Val Arg	Cys Leu Cys Pro Ala Ala	
380	385	390
Tyr Thr Gly Ile Leu Cys Glu Lys Leu	Arg Cys Glu Glu Ala Gly	
395	400	405
Ser Cys Gly Ser Asp Ser Gly Gln Gly	Ala Pro Pro His Gly Thr	
410	415	420
Pro Ala Leu Leu Leu Leu Thr Thr Leu	Leu Gly Thr Ala Ser Pro	
425	430	435
Leu Val Phe		

<210> 130  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 130  
tcgattatgg acgaacatgg cagc 24

<210> 131  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 131  
ttctgagatc cctcatcctc 20

<210> 132  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 132  
agggtcaggg acagcaagtt tggg 24

<210> 133  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 133  
tttctggac ctccgctacg gaattggctt cctctacgg acagctggat 50

<210> 134  
<211> 1493  
<212> DNA  
<213> Homo sapiens

<400> 134  
cccacgcgtc cgggtgacct gggccgagcc ctcccggctg gctaaagattg 50  
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ccggcgaggg tgtctcatg acttctcttg tggaccatgt ccgtgatctt 150  
ttttgcctgc gtggtacggg taagggatgg actgccccto tcagcctcta 200  
ctgattttta ccacacccaa gatttttttg aatggaggag acggotcaag 250  
agtttagcct tgcgactggc ccagtatcca ggtcgagggt ctgcagaagg 300

ttgtgacttt agtatacatt tttctctttt cggggacgtg gcctgcacgtg 350  
 ctatctgtctc ctgccagtgt ccagcagcca tggcctctctg ctctctggag 400  
 accctgtggt gggaattcac agcttctctat gacactacct gcattggcct 450  
 agcctccagc ccatacgtt ttcttgagtt tgacagcacc attcagaaag 500  
 tgaagtggca ttttaactat gtaagtctct ctcagatgga gtgcagcttg 550  
 gaaaaaattc agggaggagct caagttgcag cctccagcg ttctcaactct 600  
 ggaggacaca gatgtggcaa atggggtgat gaatggtcac acaccgatgc 650  
 acttggaagcc tgctcctaatt ttccgaatgg aaccagtgac agccctgggt 700  
 atectctccc tcattctcaa catcatgtgt gctgccctga atctcattcg 750  
 aggagtccac cttgcagaac attctttaca ggatccaagg agctgggtct 800  
 gctggttgga ccaaacctcg tgagccagcc acccctgacc caaatgagga 850  
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 gggaaatctc atcagcaggg agcctgtgga aaagggcatg tcagtgaat 950  
 ctgggaatgg ctggattcgg aaacatctgc ccatgtgtat tgatggcaga 1000  
 gctgttgccc acaagcgcct tttatttagg gtaaaattaa caaatccatt 1050  
 ctattctctt gaccatgct tagtacatat gacctttaac cttacattt 1100  
 atatgattct ggggttgctt cagaagtgtt atttcatgaa tcattcatat 1150  
 gatttgatcc ccaggattc tattttgtt aatgggcttt tctactaaaa 1200  
 gcataaaata ctgaggctga tttagtcagg gcaaaaccat ttactttaca 1250  
 tattcgTTTT caatactgc tgttcagtgt acacaagctt cttacggttt 1300  
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 tcagtagtac aacctaaact tgtataaaag tgtgtaaaaa tgtagcaga 1400  
 tttatatcct atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450  
 aaatctaag tgttatttaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135  
 <211> 228  
 <212> PRT  
 <213> Homo sapiens

<400> 135  
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 20 25 30  
 Leu Glu Trp Arg Arg Arg Leu Lys Ser Leu Ala Leu Arg Leu Ala  
 35 40 45

Gln Tyr Pro Gly Arg Gly Ser Ala Glu Gly Cys Asp Phe Ser Ile  
 50 55 60  
 His Phe Ser Ser Phe Gly Asp Val Ala Cys Met Ala Ile Cys Ser  
 65 70 75  
 Cys Gln Cys Pro Ala Ala Met Ala Phe Cys Phe Leu Glu Thr Leu  
 80 85 90  
 Trp Trp Glu Phe Thr Ala Ser Tyr Asp Thr Thr Cys Ile Gly Leu  
 95 100 105  
 Ala Ser Arg Pro Tyr Ala Phe Leu Glu Phe Asp Ser Ile Ile Gln  
 110 115 120  
 Lys Val Lys Trp His Phe Asn Tyr Val Ser Ser Ser Gln Met Glu  
 125 130 135  
 Cys Ser Leu Glu Lys Ile Gln Glu Glu Leu Lys Leu Gln Pro Pro  
 140 145 150  
 Ala Val Leu Thr Leu Glu Asp Thr Asp Val Ala Asn Gly Val Met  
 155 160 165  
 Asn Gly His Thr Pro Met His Leu Glu Pro Ala Pro Asn Phe Arg  
 170 175 180  
 Met Glu Pro Val Thr Ala Leu Gly Ile Leu Ser Leu Ile Leu Asn  
 185 190 195  
 Ile Met Cys Ala Ala Leu Asn Leu Ile Arg Gly Val His Leu Ala  
 200 205 210  
 Glu His Ser Leu Gln Asp Pro Arg Ser Trp Phe Cys Trp Leu Asp  
 215 220 225  
 Gln Thr Ser

<210> 136  
 <211> 239  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 39, 61, 143, 209  
 <223> unknown base

<400> 136  
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 ctgcattggc nttagcctcca ggccatacgc ttttcttgag tttagacgca 100  
 tcattcagaa agtgaagtgg cattttaact atgtaagttc cntncagatg 150  
 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200  
 ggttctcant atggaggaca catagtggc aaatgggggt 239

<210> 137  
 <211> 2300  
 <212> DNA

<213> Homo sapiens

<400> 137

ctcagcggcg cttcctcgta gcgagcctag tggcgggtgt ttgcattgaa 50  
acgtgagcgc gaccgcacct taaagagtgg ggagcaaagg gaggacagag 100  
ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggg cggggcgtcc 150  
ggacgactgt atctgagccc cagactgcc cagattctg tcgcaggctg 200  
cgaggaaagg ccctaggct gggtctgggt gcttggcggc ggcggcttcc 250  
tcccgcctcg tcttccccgg gccagaggc acctcggtct cagtcatgct 300  
gagcagagta tggaagcacc tgactacgaa gtgtatccg tgcgagaaca 350  
gctattccac gagaggatcc gcgagtgtat tatatcaaca cttctgtttg 400  
caacactgta catcctctgc cacatcttcc tgaccgcctt caagaagcct 450  
gctgagtcca ccacagtgga tgatgaagat gccaccgtca acaagattgc 500  
gctcgagctg tgcaccttta ccctggcaat tgcctgggt gctgtcctgc 550  
tctgcacct ctccatcatc agcaatgagg tgtgtctctc cctgcctcgg 600  
aactactaca tccagtggct caacggctcc ctcatccatg gcctctggaa 650  
cctgtttttt ctcttcccca acctgtccct catcttcttc atgccctttg 700  
catatttctt cactgagtct gagggctttg ctggctccag aaagggtgtc 750  
ctggggcggg tctatgagac agtgggtgat ttgatgtcc tcaactctgct 800  
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ccaacagaga gtcactctat gacttttggg agtactatct ccctacctc 900  
tactcatgca tctccttct tggggttctg ctgtcctcgg tgtgtactcc 950  
actgggtctc gcccgcatgt tctccgtcac tgggaagctg ctagtcaagc 1000  
cccgctgctt ggaagacctg gaggagcagc tgtactctc agcctttgag 1050  
gaggcagccc tgaccgcag gatctgtaat cctacttctc gctggctgcc 1100  
tttagacatg gagctgtctc acagacaggt cctggctctg cagacacaga 1150  
gggtcctgct ggagaagagg cggaaggctt cagcctggca acggaacctg 1200  
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gtcattgtg gccatccaca tctggagct gctcatcgat gaggtgccca 1300  
tgccccgagg catgcagggt acctccttag gccaggtctc cttctccaag 1350  
ctgggctcct ttggtgccgt cattcaggtt gtactcatct ttacctaata 1400  
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 aggcatttag gaagaccag caccagtgc ctccagctgg ggtgggaag 1800  
 gaaaaaactg gacctgcca tctgtgcct aggcctggag ggaagcccaa 1850  
 ggctacttgg acctcaggac ctggaatctg agaggggtgg tggcagaggg 1900  
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 tcgggagata gattgtctcc ctgctctctg gcccagcaga gcctaagcac 2200  
 tgtctatcc tggaggggct ttggaccacc tgaagacca aggggatagg 2250  
 gaggaggagg cttcagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138

<211> 489

<212> PRT

<213> Homo sapiens

<400> 138

Met	Glu	Ala	Pro	Asp	Tyr	Glu	Val	Leu	Ser	Val	Arg	Glu	Gln	Leu
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Phe	His	Glu	Arg	Ile	Arg	Glu	Cys	Ile	Ile	Ser	Thr	Leu	Leu	Phe
				20					25					30
Ala	Thr	Leu	Tyr	Ile	Leu	Cys	His	Ile	Phe	Leu	Thr	Arg	Phe	Lys
				35					40					45
Lys	Pro	Ala	Glu	Phe	Thr	Thr	Val	Asp	Asp	Glu	Asp	Ala	Thr	Val
				50					55					60
Asn	Lys	Ile	Ala	Leu	Glu	Leu	Cys	Thr	Phe	Thr	Leu	Ala	Ile	Ala
				65					70					75
Leu	Gly	Ala	Val	Leu	Leu	Leu	Pro	Phe	Ser	Ile	Ile	Ser	Asn	Glu
				80					85					90
Val	Leu	Leu	Ser	Leu	Pro	Arg	Asn	Tyr	Tyr	Ile	Gln	Trp	Leu	Asn
				95					100					105
Gly	Ser	Leu	Ile	His	Gly	Leu	Trp	Asn	Leu	Val	Phe	Leu	Phe	Pro
				110					115					120
Asn	Leu	Ser	Leu	Ile	Phe	Leu	Met	Pro	Phe	Ala	Tyr	Phe	Phe	Thr

	125		130		135
Glu Ser Glu Gly	Phe Ala Gly Ser Arg	Lys Gly Val Leu Gly Arg			
	140	145			150
Val Tyr Glu Thr	Val Val Met Leu Met	Leu Leu Thr Leu Leu Val			
	155	160			165
Leu Gly Met Val Trp	Val Ala Ser Ala	Ile Val Asp Lys Asn Lys			
	170	175			180
Ala Asn Arg Glu Ser	Leu Tyr Asp Phe	Trp Glu Tyr Tyr Leu Pro			
	185	190			195
Tyr Leu Tyr Ser Cys	Ile Ser Phe Leu Gly	Val Leu Leu Leu Leu			
	200	205			210
Val Cys Thr Pro Leu	Gly Leu Ala Arg Met	Phe Ser Val Thr Gly			
	215	220			225
Lys Leu Leu Val Lys	Pro Arg Leu Leu Glu	Asp Leu Glu Glu Gln			
	230	235			240
Leu Tyr Cys Ser Ala	Phe Glu Glu Ala Ala	Leu Thr Arg Arg Ile			
	245	250			255
Cys Asn Pro Thr Ser	Cys Trp Leu Pro Leu	Asp Met Glu Leu Leu			
	260	265			270
His Arg Gln Val Leu	Ala Leu Gln Thr Gln	Arg Val Leu Leu Glu			
	275	280			285
Lys Arg Arg Lys Ala	Ser Ala Trp Gln Arg	Asn Leu Gly Tyr Pro			
	290	295			300
Leu Ala Met Leu Cys	Leu Leu Val Leu Thr	Gly Leu Ser Val Leu			
	305	310			315
Ile Val Ala Ile His	Ile Leu Glu Leu Leu	Ile Asp Glu Ala Ala			
	320	325			330
Met Pro Arg Gly Met	Gln Gly Thr Ser Leu	Gly Gln Val Ser Phe			
	335	340			345
Ser Lys Leu Gly Ser	Phe Gly Ala Val Ile	Gln Val Val Leu Ile			
	350	355			360
Phe Tyr Leu Met Val	Ser Ser Val Val Gly	Phe Tyr Ser Ser Pro			
	365	370			375
Leu Phe Arg Ser Leu	Arg Pro Arg Trp His	Asp Thr Ala Met Thr			
	380	385			390
Gln Ile Ile Gly Asn	Cys Val Cys Leu Leu	Val Leu Ser Ser Ala			
	395	400			405
Leu Pro Val Phe Ser	Arg Thr Leu Gly Leu	Thr Arg Phe Asp Leu			
	410	415			420
Leu Gly Asp Phe Gly	Arg Phe Asn Trp Leu	Gly Asn Phe Tyr Ile			
	425	430			435
Val Phe Leu Tyr Asn	Ala Ala Phe Ala Gly	Leu Thr Thr Leu Cys			

440	445	450
Leu Val Lys Thr Phe Thr Ala Ala Val Arg Ala Glu Leu Ile Arg		
455	460	465
Ala Phe Gly Leu Asp Arg Leu Pro Leu Pro Val Ser Gly Phe Pro		
470	475	480
Gln Ala Ser Arg Lys Thr Gln His Gln		
485		

<210> 139  
 <211> 294  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 53, 57  
 <223> unknown base

<400> 139  
 ggctgcccag ggaaggcccc ttgggttggt ctggttgct tggcggcggc 50  
 ggnntctntcc cgcctcgtcc tccccgggcc cagaggcacc tcggcttcag 100  
 tcatgctgag cagagtatgg aagcacctga ctacgaagtgc ctatccgtgc 150  
 gagaacagct attccacgag aggatccgag agtgtattat atcaacacct 200  
 ctgtttgcaa cactgtacat cctctgccac atcttctcga ccgcttcaa 250  
 gaagcctgct gagttacca cagtggatga tgaagatgcc accg 294

<210> 140  
 <211> 526  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 197, 349  
 <223> unknown base

<400> 140  
 gaccgacott aaagagtggg agcaaaggga ggacagagcc ttttaaacg 50  
 aggcggttggt gcctgccott taaggcggg gcgtccggac gactgtatct 100  
 gagccccaga ctgccccgag tttctgtcgc aggctcgcag gaaaggcccc 150  
 taggctgggt ctggtgcttg gcggcggcgg ctctctcccc ttgtctntcc 200  
 ccgggcccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250  
 cacctgacta cgaagtgcta tccgtgcgag aacagctatt ccacgagagg 300  
 atccgcgagt gtattatato aacacttctg tttgcaacac tgtacatcnt 350  
 ctgccacatc ttcctgacct gcttcaagaa gcctgctgag ttcaccacag 400  
 tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450



tttacccctgg caattgccct ggggtgctgtc ctgctcctgc ccttctccat 500  
catcagcaat gaggtgctgc actccc 526

<210> 141  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe

<400> 141  
gactgtatct gagccccaga ctgc 24

<210> 142  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 142  
tcagcaatga ggtgctgtc 20

<210> 143  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 143  
tgaggaagat gagggacagg ttgg 24

<210> 144  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 144  
tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50

<210> 145  
<211> 685  
<212> DNA  
<213> Homo sapiens

<400> 145  
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caaacctggt ttggaattga ggaaacttct cttttgatct cagcccttgg 100  
tggtccaggt cttcatgctg ctgtgggtga tattactggt cctggctcct 150  
gtcagtggaac agtttgcaag gacacccagg cccattattt tcctccagcc 200  
tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaaaaa aatggtacca tcggtacctt 300  
 gggaagaaaa tactaagaga aaccccagac aatatccttg aggttcagga 350  
 atctggagag tacagatgcc agggccaggg ctcccctctc agtagccctg 400  
 tgcacttgga tttttcttca gagatgggat ttctcatgc tgcccaggct 450  
 aatgttgaac tcttgggctc aagtgatctg ctcacctagg cctctcaaag 500  
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550  
 aaggagactc tgtggttctg aggtgccggg caaaggcgga agtaacctg 600  
 aataatacta tttaacaagaa tgataatgtc ctggcattcc ttaataaaaag 650  
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146  
 <211> 124  
 <212> PRT  
 <213> Homo sapiens

<400> 146  
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 20 25 30  
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys  
 35 40 45  
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg  
 50 55 60  
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu  
 65 70 75  
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser  
 80 85 90  
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly  
 95 100 105  
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser  
 110 115 120  
 Asp Leu Leu Thr

<210> 147  
 <211> 1621  
 <212> DNA  
 <213> Homo sapiens

<400> 147  
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 cccccccggt gtgaggcggc ctcacagggc cgggtgggct ggcgagccga 100  
 cgcggcggcg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaaacat	ggctccgag	aaactgagca	ccttttgcc	gttgctgcta	200
tacctcatcg	ggcggtgat	tgccggagca	gatttctata	agatcttggg	250
ggtgcctcga	agtgcctcta	taaaggatat	taaaaaggcc	tataggaac	300
tagccctcga	gottcatccc	gaccggaacc	ctgatgatcc	acaagccag	350
gagaaattcc	aggatctggg	tgctgcttat	gaggttctgt	cagatagtga	400
gaaacggaaa	cagtacgata	cttatgggtga	agaaggatta	aaagatggtc	450
atcagagctc	ccatggagac	attttttcac	acttctttgg	ggattttggt	500
ttcatgtttg	gaggaacccc	tcgtcagcaa	gacagaaata	ttccaagagg	550
aagtgtatatt	attgtagatc	tagaagtcac	tttggaaгаа	gtatatgcag	600
gaaattttgt	ggaagtagtt	agaacaacac	ctgtggcaag	gcaggtccct	650
ggcaaacgga	agtgcatttg	tcggcaagag	atgcggacca	cccagctggg	700
ccctgggcgc	ttccaaatga	cccaggaggt	ggtctgcgac	gaatgcccta	750
atgtcaaaat	agtgaatgaa	gaacgaaacg	tggaagtaga	aatagagcct	800
ggggtgagag	acggcatgga	gtaccccttt	attggagaag	gtgagcccta	850
cgtggatggg	gagcctggag	atttacggtt	ccgaatcaaa	gttgcaaacg	900
acccaatatt	tgaagggaga	ggagatgatt	gtacacacaa	tgtgacaatc	950
tcattagtgtg	agtcactggt	tggtcttgag	atggatatata	ctcacttgga	1000
tggtcacaaг	gtacatatatt	cccgggataa	gatcaccagg	ccaggagcga	1050
agctatggaa	gaaaggggaa	gggtccccc	actttgacaa	caacaatatc	1100
aagggtctct	tgataatcac	ttttgatgtg	gattttccaa	aagaacagtt	1150
aacagaggaa	gcgagagaag	gtatcaaaaa	gctactgaaa	caagggtcag	1200
tgcagaaggt	atacaatgga	ctgcaaggat	attgagagtг	aataaaattg	1250
gactttgttt	aaaataagtg	aataagcgat	atttattatc	tgcaaggttt	1300
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tttttatcta	atgatcatca	tgaatagtt	aagagggtct	aagaatttgt	1400
ccattttgcat	tcggaaaaga	atgaccagca	aaagggttac	taatacctct	1450
ccctttgggg	atttaattgt	tggtgtctgc	gcctgagttt	caagaattaa	1500
agctgagcaa	ggactccagg	agcaaaaagaa	acacaatata	gagggttgga	1550
gttgtagtga	atttcattca	aaatgccaac	tggaagaagtc	tgtttttaaa	1600
tacattttgt	tggtattttt	a	1621		

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<210> 148
<211> 358
<212> PRT
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<213> Homo sapiens

<400> 148

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Leu Ile Gly Ala Val Ile Ala Gly Arg Asp Phe Tyr Lys Ile Leu  
20 30  
Gly Val Pro Arg Ser Ala Ser Ile Lys Asp Ile Lys Lys Ala Tyr  
35 40 45  
Arg Lys Leu Ala Leu Gln Leu His Pro Asp Arg Asn Pro Asp Asp  
50 55 60  
Pro Gln Ala Gln Glu Lys Phe Gln Asp Leu Gly Ala Ala Tyr Glu  
65 70 75  
Val Leu Ser Asp Ser Glu Lys Arg Lys Gln Tyr Asp Thr Tyr Gly  
80 85 90  
Glu Glu Gly Leu Lys Asp Gly His Gln Ser Ser His Gly Asp Ile  
95 100 105  
Phe Ser His Phe Phe Gly Asp Phe Gly Phe Met Phe Gly Gly Thr  
110 115 120  
Pro Arg Gln Gln Asp Arg Asn Ile Pro Arg Gly Ser Asp Ile Ile  
125 130 135  
Val Asp Leu Glu Val Thr Leu Glu Glu Val Tyr Ala Gly Asn Phe  
140 145 150  
Val Glu Val Val Arg Asn Lys Pro Val Ala Arg Gln Ala Pro Gly  
155 160 165  
Lys Arg Lys Cys Asn Cys Arg Gln Glu Met Arg Thr Thr Gln Leu  
170 175 180  
Gly Pro Gly Arg Phe Gln Met Thr Gln Glu Val Val Cys Asp Glu  
185 190 195  
Cys Pro Asn Val Lys Leu Val Asn Glu Glu Arg Thr Leu Glu Val  
200 205 210  
Glu Ile Glu Pro Gly Val Arg Asp Gly Met Glu Tyr Pro Phe Ile  
215 220 225  
Gly Glu Gly Glu Pro His Val Asp Gly Glu Pro Gly Asp Leu Arg  
230 235 240  
Phe Arg Ile Lys Val Val Lys His Pro Ile Phe Glu Arg Arg Gly  
245 250 255  
Asp Asp Leu Tyr Thr Asn Val Thr Ile Ser Leu Val Glu Ser Leu  
260 265 270  
Val Gly Phe Glu Met Asp Ile Thr His Leu Asp Gly His Lys Val  
275 280 285  
His Ile Ser Arg Asp Lys Ile Thr Arg Pro Gly Ala Lys Leu Trp  
290 295 300

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys  
 305 310  
 Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln  
 320 325 330  
 Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln  
 335 340 345  
 Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr  
 350 355

<210> 149  
 <211> 509  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> unsure  
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,  
 482  
 <223> unknown base  
  
 <400> 149  
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 gntgcgaccg aagcggcggg cggaggaggt tttgaggatt tttggaacag 100  
 gacccggaca gaggaacct gggtccgcag aacntgagca cnttttgcct 150  
 gttgntgnta tacttcatcg gggcggtgat tgccggaaga gatttntata 200  
 agattttggg gtgcctngaa gtgccttnta taaaggatat taaaaggcc 250  
 tataggaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300  
 acaagcccag gagaaattcc aggatttggg tgctgcttat gaggttntgt 350  
 cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400  
 aaagatggtn atcagagetc ccatggagac attttttcac acttntttgg 450  
 ggattttggt ttcattgttg gaggaacccc tngtcagcaa gacagaaaata 500  
 ttccaagag 509  
  
 <210> 150  
 <211> 1532  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 150  
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 ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150  
 gaccgggact gagtcaggag cccctctggaa gcatggagac tgtgtgtgatt 200  
 gttgccatag gtgtgctggc caccatcttt ctggcttcgt ttgcagcctt 250  
 ggtgctggtt tgcaggcagc gctactgcgc gccgcgagac ctgctgcagc 300

gctatgatcc taagcccatt gtggacctca ttggtgccat ggagacccag 350  
 tctgagccct ctgaggttaga actggacgat gtcgttatca ccaaccccc 400  
 cattgagccc attctggaga atgaagactg gatcgaagat gctctgggtc 450  
 tcatgtccca ctgcattgcc atcttgaaga tttgtcacac tctgacagag 500  
 aagcttgttg ccatgacaat gggctctggg gccaaagatga agacttcagc 550  
 cagtgtcagc gacatcattg tgggtggccaa gcggatcagc cccaggggtg 600  
 atgatgttgt gaagtogatg tacctccgtg tggaccccaa actcctggac 650  
 gcacggacga ctgccctgct cctgtctgtc agtcacctgg tgcctgtgac 700  
 aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750  
 tgtcggctgc tgaggagcat ttggaagtcc ttcgagaagc agccctagct 800  
 tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850  
 gtctgcaatt tagtgcctac aggccagcag ctagccatga agcccccctg 900  
 cgccatccct ggatggctca gcttagcctt ctacttttct ctatagatt 950  
 agttgttctc caccggctga gagttcagct gtgtgtgat agtaaagcag 1000  
 gagatccccg tcagtttatg cctcttttgc agttgcaaac tgtggctggt 1050  
 gagtggcagt ctaatactac agttagggga gatgccattc actctctgca 1100  
 agaggagtat tgaaaactgg tggactgtca gctttattta gctcacctag 1150  
 tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200  
 taaaattaga atttctggcc tctctogac gtgcagaatg tgtggcaatt 1250  
 ctgatctgca ttttcagaag aggacaatca attgaaaact agtagggggt 1300  
 tcttcttttg gcaagacttg tactctctca cctggcctgt ttcatttatt 1350  
 tgtattatct gcttgggtcc tgagggtctc ggtctctctc tctcccttgc 1400  
 aggtttgggt ttgaagctga ggaactacaa agttgatgat tcttttttta 1450  
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<210> 151

<211> 226

<212> PRT

<213> Homo sapiens

<400> 151

Met	Glu	Thr	Val	Val	Ile	Val	Ala	Ile	Gly	Val	Leu	Ala	Thr	Ile
1				5					10					15

Phe	Leu	Ala	Ser	Phe	Ala	Ala	Leu	Val	Leu	Val	Cys	Arg	Gln	Arg
				20					25					30

Tyr	Cys	Arg	Pro	Arg	Asp	Leu	Leu	Gln	Arg	Tyr	Asp	Ser	Lys	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	35	40	45
Ile Val Asp Leu	Ile Gly Ala Met Glu	Thr Gln Ser Glu Pro	Ser 60
	50	55	
Glu Leu Glu Leu Asp	Asp Val Val Ile Thr	Asn Pro His Ile Glu	75
	65	70	
Ala Ile Leu Glu Asn	Glu Asp Trp Ile Glu	Asp Ala Ser Gly Leu	90
	80	85	
Met Ser His Cys Ile	Ala Ile Leu Lys Ile	Cys His Thr Leu Thr	105
	95	100	
Glu Lys Leu Val Ala	Met Thr Met Gly Ser	Gly Ala Lys Met Lys	120
	110	115	
Thr Ser Ala Ser Val	Ser Asp Ile Ile Val	Ala Lys Arg Ile	135
	125	130	
Ser Pro Arg Val Asp	Asp Val Val Lys Ser	Met Tyr Pro Pro Leu	150
	140	145	
Asp Pro Lys Leu Leu	Asp Ala Arg Thr Thr	Ala Leu Leu Leu Ser	165
	155	160	
Val Ser His Leu Val	Leu Val Thr Arg Asn	Ala Cys His Leu Thr	180
	170	175	
Gly Gly Leu Asp Trp	Ile Asp Gln Ser Leu	Ser Ala Ala Glu Glu	195
	185	190	
His Leu Glu Val Leu	Arg Glu Ala Ala Leu	Ala Ser Glu Pro Asp	210
	200	205	
Lys Gly Leu Pro Gly	Pro Glu Gly Phe Leu	Gln Glu Gln Ser Ala	225
	215	220	

Ile

<210> 152  
 <211> 1027  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 1017, 1020  
 <223> unknown base

<400> 152  
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 tcgccgtgt ccccaccact gcagccatga tctccttaac ggacacgcag 100  
 aaaattggaa tgggattaac aggatttgga gtgtttttcc tgttctttgg 150  
 aatgattctc ttttttgaca aagcactact ggctattgga aatgttttat 200  
 ttgtagccgg ctgtggctttt gtaattgggt tagaaagaac attcagattc 250  
 ttcttccaaa aacataaaat gaaagctaca ggtttttttc tgggtggtgt 300





Gln	Lys	His	Lys	Met	Lys	Ala	Thr	Gly	Phe	Phe	Leu	Gly	Gly	Val
				65					70					75
Phe	Val	Val	Leu	Ile	Gly	Trp	Pro	Leu	Ile	Gly	Met	Ile	Phe	Glu
				80					85					90
Ile	Tyr	Gly	Phe	Phe	Leu	Leu	Phe	Arg	Gly	Phe	Phe	Pro	Val	Val
				95					100					105
Val	Gly	Phe	Ile	Arg	Arg	Val	Pro	Val	Leu	Gly	Ser	Leu	Leu	Asn
				110					115					120
Leu	Pro	Gly	Ile	Arg	Ser	Phe	Val	Asp	Lys	Val	Gly	Glu	Ser	Asn
				125					130					135

Asn Met Val

<210> 154  
 <211> 405  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 66  
 <223> unknown base

<400> 154  
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 actcagcttc coacntggg ctttccgagg tgtttccgcc gctgtcccca 100  
 ccaactgcagc catgatctcc ttaacggaca cgcagaaaaa tggaatggga 150  
 ttaacccgat ttggagtgtt tttctgttc ttggaatga ttctctttt 200  
 tgacaaaagca ctactggcta ttggaaatgt tttatttga gccggcttgg 250  
 cttttgtaat tggtttagaa agaacattca gattctctt ccaaaaacat 300  
 aaaaatgaag ctacaggttt tttctgggt ggtgtatttg tagtccttat 350  
 tggttggcct ttgataggca tgatcttcga aatttatgga tttttctct 400  
 tgttc 405

<210> 155  
 <211> 1781  
 <212> DNA  
 <213> Homo sapiens

<400> 155  
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 tttcttctt ctgaaatct ttgactgtgg gtagttattt atttctgaat 150  
 aagagcgtcc acgcatcatg gacctcgagg gactgtgaa gtctcagttc 200  
 ctgtgccacc tggcttctg ctacgtcttt attgctcag ggctaatacat 250

caacaccatt cagctcttca ctctctctct ctggcccatt aacaagcagc 300  
tcttccggaa gatcaactgc agactgtcct attgcatctc aagccagctg 350  
gtgatgtctg tggagtgggtg gtcgggcacg gaatgcacca tcttcacgga 400  
cccgcgcgcc tacctcaagt atgggaagga aatgccatc gtggttctca 450  
accacaagtt tgaattgac tttctgtgtg gctggagcct gtccgaaacg 500  
tttgggtctg tagggggctc caaggtcctg gccaaagaa agctggccta 550  
tgtcccaatt atcggtctga tgtggtactt caccgagatg gtcttctgtt 600  
cgcgcaagtg ggagcaggat cgcaagacgg ttgccaccag tttgcagcac 650  
ctccgggact accccgagaa gtattttttc ctgattcact gtgagggcac 700  
acggttcacg gagaagaagc atgagatcag catgcaggtg gcccgggcca 750  
aggggctgcc tcgcctcaag catcacctgt tgccaagaa caagggtctc 800  
gccatcaccg tgaggagctt gagaaatgta gtttcagctg tatatgactg 850  
tacactcaat ttcagaaata atgaaaatcc aacactgctg ggagtcttaa 900  
acggaaagaa ataccatgca gatttgtatg ttaggagat cccactggaa 950  
gacatccctg aagacgatga cgagtgtctg gcctggctgc acaagctcta 1000  
ccaggagaag gatgccttcc aggaggagta ctacaggacg ggcaccttcc 1050  
cagagacgcc catggtgccc cccgcgcgcg cctggacctc cgtgaactgg 1100  
ctgttttggg cctcgctggt gctctacctt ttcttcaggt tctgggtcag 1150  
catgatcagg agcgggtctt ccctgacgct ggcagcttc atctcgtct 1200  
tctttgtgac ctcogtggga gttcgatgga tgattggtg gacggaaatt 1250  
gacaagggtc ctgcctacgg caactctgac agcaagcaga aactgaatga 1300  
ctgactcagg gaggtgtcac catccgaagg gaaccttggg gaactggttg 1350  
cctctgcata tctccttag tgggacacgg tgacaaagcg tgggtgagcc 1400  
cctgctgggc acggcggaag tcacgacctc tccagccagg gagtctggtc 1450  
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gctgcagggg agggcagggc tggggaccga aggggacaag ttccccttcc 1650  
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aaaagtgcct taggtgagat gactaaatta tgccctcaag aaaaaaaaaa 1750  
taaagtgcct ttctgggtca aaaaaaaaaa a 1781

<210> 156

<211> 378  
 <212> PRT  
 <213> Homo sapiens

<400> 156

Met	Asp	Leu	Ala	Gly	Leu	Leu	Lys	Ser	Gln	Phe	Leu	Cys	His	Leu	1	5	10	15
Val	Phe	Cys	Tyr	Val	Phe	Ile	Ala	Ser	Gly	Leu	Ile	Ile	Asn	Thr	20	25	30	35
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu	40	45	50	55
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln	60	65	70	75
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile	80	85	90	95
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala	100	105	110	115
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly	120	125	130	135
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val	140	145	150	155
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met	160	165	170	175
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln	180	185	190	195
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr	200	205	210	215
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe	220	225	230	235
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys	240	245	250	255
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly	260	265	270	275
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val	280	285	290	295
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu	300	305	310	315
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val	320	325	330	335
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys	340	345	350	355
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln	360	365	370	375
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val	380	385	390	395

290	295	300
Pro Pro Arg Arg Pro Trp Thr Leu Val Asn Trp Leu Phe Trp Ala		
305	310	315
Ser Leu Val Leu Tyr Pro Phe Phe Gln Phe Leu Val Ser Met Ile		
320	325	330
Arg Ser Gly Ser Ser Leu Thr Leu Ala Ser Phe Ile Leu Val Phe		
335	340	345
Phe Val Ala Ser Val Gly Val Arg Trp Met Ile Gly Val Thr Glu		
350	355	360
Ile Asp Lys Gly Ser Ala Tyr Gly Asn Ser Asp Ser Lys Gln Lys		
365	370	375
Leu Asn Asp		

<210> 157  
 <211> 1849  
 <212> DNA  
 <213> Homo sapiens

<400> 157  
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 acggaaggtt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150  
 tactgattcc caaatggatg atgttgaagt tgtttataca attgacattc 200  
 agaaatatat tccatgctat cagcttttta gcttttataa ttottcaggc 250  
 gaagtaaatg agcaagcact gaagaaaata ttatcaaatg tcaaaaagaa 300  
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 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccac 400  
 gaccttgttt ttctgctatt aacaccaagt ataataacag aaagctgctc 450  
 tactcatcga ctggaacatt ccttatataa acctcaaaaa ggactttttc 500  
 acagggtacc tttagtggtt gccaatctcg gcatgtctga acaactgggt 550  
 tataaaactg tatcagggtc ctgtatgtcc actggtttta gccgagcagt 600  
 acaaacacac agctctaaat tttttgaaga agatggatcc ttaaaggagg 650  
 tacataagat aatgaaaatg tatgcttcat tacaagagga attaaagagt 700  
 atatgcaaaa aagtgaaga cagtgaacaa gcagtagata aactagtaaa 750  
 ggatgtaaac agattaaaac gagaatttga gaaaaggaga ggagcacaga 800  
 ttccaggcagc aagagagaag aacatccaaa aagaccctca ggagaacatt 850  
 tttctttgtc aggcattacg gacctttttt ccaaatcttg aattttctca 900  
 ttcattgtgt atgtctttaa aaaatagaca tgtttctaaa agtagctgta 950



Ser Asp Gln Ile Met Thr Phe Arg Glu Arg Leu Leu His Lys Asn  
 110 115 120  
 Leu Gln Glu His Phe Ser Asn Gln Asp Leu Val Phe Leu Leu Leu  
 125 130 135  
 Thr Pro Ser Ile Ile Thr Glu Ser Cys Ser Thr His Arg Leu Glu  
 140 145 150  
 His Ser Leu Tyr Lys Pro Gln Lys Gly Leu Phe His Arg Val Pro  
 155 160 165  
 Leu Val Val Ala Asn Leu Gly Met Ser Glu Gln Leu Gly Tyr Lys  
 170 175 180  
 Thr Val Ser Gly Ser Cys Met Ser Thr Gly Phe Ser Arg Ala Val  
 185 190 195  
 Gln Thr His Ser Ser Lys Phe Phe Glu Glu Asp Gly Ser Leu Lys  
 200 205 210  
 Glu Val His Lys Ile Asn Glu Met Tyr Ala Ser Leu Gln Glu Glu  
 215 220 225  
 Leu Lys Ser Ile Cys Lys Lys Val Glu Asp Ser Glu Gln Ala Val  
 230 235 240  
 Asp Lys Leu Val Lys Asp Val Asn Arg Leu Lys Arg Glu Ile Glu  
 245 250 255  
 Lys Arg Arg Gly Ala Gln Ile Gln Ala Ala Arg Glu Lys Asn Ile  
 260 265 270  
 Gln Lys Asp Pro Gln Glu Asn Ile Phe Leu Cys Gln Ala Leu Arg  
 275 280 285  
 Thr Phe Phe Pro Asn Ser Glu Phe Leu His Ser Cys Val Met Ser  
 290 295 300  
 Leu Lys Asn Arg His Val Ser Lys Ser Ser Cys Asn Tyr Asn His  
 305 310 315  
 His Leu Asp Val Val Asp Asn Leu Thr Leu Met Val Glu His Thr  
 320 325 330  
 Asp Ile Pro Glu Ala Ser Pro Ala Ser Thr Pro Gln Ile Ile Lys  
 335 340 345  
 His Lys Ala Leu Asp Leu Asp Asp Arg Trp Gln Phe Lys Arg Ser  
 350 355 360  
 Arg Leu Leu Asp Thr Gln Asp Lys Arg Ser Lys Ala Asn Thr Gly  
 365 370 375  
 Ser Ser Asn Gln Asp Lys Ala Ser Lys Met Ser Ser Pro Glu Thr  
 380 385 390  
 Asp Glu Glu Ile Glu Lys Met Lys Gly Phe Gly Glu Tyr Ser Arg  
 395 400 405  
 Ser Pro Thr Phe

<210> 159  
<211> 2651  
<212> DNA  
<213> Homo sapiens

<400> 159  
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cgccgccccac accctctgcg gtccccggcg cgctgtccac ccttccctcc 150  
ttcccccgct ccccgccctcg ccggccagtc agcttgccgg gtctgctgcc 200  
ccgogaaacc ccgaggtcac cagcccgccg ctctgcttcc ctgggcccgc 250  
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cgctgtctcg cctcttccac caactccaac tcttctctcc tccagctcca 400  
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ccgcgctgct ggctgcccag ctcaagtcga aaagtgtctc ggaagtgcga 600  
cgtcttttac tgtccaaagg ctccaacaag aacgatgccc ccttccacga 650  
gatcaacggg gatcatttga agatctgtcc ccagggttct acctgctgct 700  
ctcaagagat ggaggagaag tacagcctgc aaagtaaaga tgatttcaaa 750  
agtgtgtgta cgaacagtg caatcatttg caagctgtct ttgcttcacg 800  
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aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900  
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tcttgagcgc gatgttccgc ctggtgaact ccaggtacca ctttacagat 1050  
gagtatctgg aatgtgtgag caagtatacg gacgagctga agcccttcgg 1100  
agatgtccct cgcaaatgta agctccaggt tactctgtgt tttgtagcag 1150  
cccgtacttt cgctcaaggc ttagcgggtg cgggagatgt cgtgagcaag 1200  
gtctccgtgg taaacccccc agcccaggtg acccatgccc tgttgaagat 1250  
gatctactgc tcccactgcc ggggtctcgt gactgtgaag ccatgttaca 1300  
actactgctc aaacatcatg agaggctggt tggccaacca aggggatctc 1350  
gattttgaat ggaacaattt catagatgct atgctgatgg tggcagagag 1400  
gctagagggg cctttcaaca ttgaatcggg catggatccc atcgatgtga 1450

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cagaaggttt	tccagggatg	tggaccccc	aagccctcc	cagctggacg	1550
aatttctcgt	tccatctctg	aaagtgcctt	cagtgtctcg	ttcagaccac	1600
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ctggttactg	atgtcaagga	gaaactgaaa	caggccaaga	aattctggtc	1700
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gcagtgcag	gaaatggatt	agccaaccag	ggcaacaacc	cagaggtcca	1850
ggttgacacc	agcaaaccag	acatactgat	ccttcgtcaa	atcatggctc	1900
ttcagatgat	gaccagcaag	atgaagaatg	catacaatgg	gaacgacgtg	1950
gacttctttg	atatcagtga	tgaagttagt	ggagaaggaa	gtggaagtgg	2000
ctgtgagtat	cagcagtgcc	cttcagagtt	tgactacaat	gccactgacc	2050
atgctgggaa	gagtgccaat	gagaaagcgg	acagtgtctg	tgtccgtcct	2100
ggggcacagg	cctacctcct	cactgtcttc	tgcatcttgt	tcttggttat	2150
gcagagagag	tggagataat	tctcaaaact	tgagaaaag	gtttcatcaa	2200
aaagttaaaa	ggcaccagtt	atcacttttc	taccatccta	gtgactttgc	2250
tttttaaatg	aatggacaac	aatgtacagt	ttttactatg	tggccactgg	2300
tttaagaagt	gctgactttg	ttttctcatt	cagttttggg	aggaaaaggg	2350
actgtgcatt	gagttggttc	ctgctccccc	aaaccatggt	aaacgtggct	2400
aacagtgtag	gtacagaact	atagttagtt	gtgcatttgt	gattttatca	2450
ctctattatt	tgtttgtatg	ttttttcttc	atttcgtttg	tgggtttttt	2500
tttccaaact	tgatctgcgc	ttgtttctta	caagcaaaac	agggtccctt	2550
cttggcacgt	aacatgtacg	tattttctga	atattaaata	gctgtacaga	2600
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<210> 160



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Asp	Ala	Pro	Leu	His 50	Glu	Ile	Asn	Gly	Asp 55	His	Leu	Lys	Ile	Cys 60	
Pro	Gln	Gly	Ser	Thr 65	Cys	Cys	Ser	Gln	Glu 70	Met	Glu	Glu	Lys	Tyr 75	
Ser	Leu	Gln	Ser	Lys 80	Asp	Asp	Phe	Lys	Ser 85	Val	Val	Ser	Glu	Gln 90	
Cys	Asn	His	Leu	Gln 95	Ala	Val	Phe	Ala	Ser 100	Arg	Tyr	Lys	Lys	Phe 105	
Asp	Glu	Phe	Phe	Lys 110	Glu	Leu	Leu	Glu	Asn 115	Ala	Glu	Lys	Ser	Leu 120	
Asn	Asp	Met	Phe	Val 125	Lys	Thr	Tyr	Gly	His 130	Leu	Tyr	Met	Gln	Asn 135	
Ser	Glu	Leu	Phe	Lys 140	Asp	Leu	Phe	Val	Glu 145	Leu	Lys	Arg	Tyr	Tyr 150	
Val	Val	Gly	Asn	Val 155	Asn	Leu	Glu	Glu	Met 160	Leu	Asn	Asp	Phe	Trp 165	
Ala	Arg	Leu	Leu	Glu 170	Arg	Met	Phe	Arg	Leu 175	Val	Asn	Ser	Gln	Tyr 180	
His	Phe	Thr	Asp	Glu 185	Tyr	Leu	Glu	Cys	Val 190	Ser	Lys	Tyr	Thr	Glu 195	
Gln	Leu	Lys	Pro	Phe 200	Gly	Asp	Val	Pro	Arg 205	Lys	Leu	Lys	Leu	Gln 210	
Val	Thr	Arg	Ala	Phe 215	Val	Ala	Ala	Arg	Thr 220	Phe	Ala	Gln	Gly	Leu 225	
Ala	Val	Ala	Gly	Asp 230	Val	Val	Ser	Lys	Val 235	Ser	Val	Val	Asn	Pro 240	
Thr	Ala	Gln	Cys	Thr 245	His	Ala	Leu	Leu	Lys 250	Met	Ile	Tyr	Cys	Ser 255	
His	Cys	Arg	Gly	Leu 260	Val	Thr	Val	Lys	Pro 265	Cys	Tyr	Asn	Tyr	Cys 270	
Ser	Asn	Ile	Met	Arg 275	Gly	Cys	Leu	Ala	Asn 280	Gln	Gly	Asp	Leu	Asp 285	
Phe	Glu	Trp	Asn	Asn 290	Phe	Ile	Asp	Ala	Met 295	Leu	Met	Val	Ala	Glu 300	
Arg	Leu	Glu	Gly	Pro 305	Phe	Asn	Ile	Glu	Ser 310	Val	Met	Asp	Pro	Ile 315	
Asp	Val	Lys	Ile	Ser 320	Asp	Ala	Ile	Met	Asn 325	Met	Gln	Asp	Asn	Ser 330	
Val	Gln	Val	Ser	Gln 335	Lys	Val	Phe	Gln	Gly 340	Cys	Gly	Pro	Pro	Lys 345	
Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala	

350	355	360
Phe Ser Ala Arg	Phe Arg Pro His His	Pro Glu Glu Arg Pro Thr
365	370	375
Thr Ala Ala Gly	Thr Ser Leu Asp Arg	Leu Val Thr Asp Val Lys
380	385	390
Glu Lys Leu Lys	Gln Ala Lys Lys Phe	Trp Ser Ser Leu Pro Ser
395	400	405
Asn Val Cys Asn	Asp Glu Arg Met Ala	Ala Gly Asn Gly Asn Glu
410	415	420
Asp Asp Cys Trp	Asn Gly Lys Gly Lys	Ser Arg Tyr Leu Phe Ala
425	430	435
Val Thr Gly Asn	Gly Leu Ala Asn Gln	Gly Asn Asn Pro Glu Val
440	445	450
Gln Val Asp Thr	Ser Lys Pro Asp Ile	Leu Ile Leu Arg Gln Ile
455	460	465
Met Ala Leu Arg	Val Met Thr Ser Lys	Met Lys Asn Ala Tyr Asn
470	475	480
Gly Asn Asp Val	Asp Phe Phe Asp Ile	Ser Asp Glu Ser Ser Gly
485	490	495
Glu Gly Ser Gly	Ser Gly Cys Glu Tyr	Gln Gln Cys Pro Ser Glu
500	505	510
Phe Asp Tyr Asn	Ala Thr Asp His Ala	Gly Lys Ser Ala Asn Glu
515	520	525
Lys Ala Asp Ser	Ala Gly Val Arg Pro	Gly Ala Gln Ala Tyr Leu
530	535	540
Leu Thr Val Phe	Cys Ile Leu Phe Leu	Val Met Gln Arg Glu Trp
545	550	555

Arg

<210> 161

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 161

ctccgtggta aaccccacag ccc 23

<210> 162

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 162  
tcacatcgat gggatccatg accg 24

<210> 163  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 163  
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<210> 164  
<211> 870  
<212> DNA  
<213> Homo sapiens

<400> 164  
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gctgagtatc ctgacctgag tcatccccag ggaatcaggag cctccagcag 100  
ggaaccttcc attatattct tcaagcaact tacagctgca cgcacagttg 150  
cgatgaaagt tataatctct tccctcctcc tgttgctgcc actaatgctg 200  
atgtccatgg tctctagcag cctgaatcca ggggtcgcca gaggccacag 250  
ggacogaggc caggcttcta ggagatggct ccaggaaggc ggccaagaat 300  
gtgagtgcga agattgggtc ctgagagccc cgagaagaaa attcatgaca 350  
tgtctctggc tgccaaagaa gcagtgcccc tgtgatcatt tcaagggcaa 400  
tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450  
ccagagcctg ccagcaattt ctcaaacaat gtcagctaag aagctttgct 500  
ctgcctttgt aggagctctg agcgccact cttccaatta aacattctca 550  
gccaagaaga cagtgcagc acctaccaga cactcttctt cteccacctc 600  
actctccacc tgtaccaccc octaaatcat tccagtgctc tcaaaaagca 650  
tgtttttcaa gatcattttg tttgttgctc tctctagtgt cttcttctct 700  
cgtcagtcct agcctgtgcc ctccccctac ccaggcttag gcttaattac 750  
ctgaaagatt ccaggaaact gtagcttcct agctagtgtc atttaacctt 800  
aaatgcaatc aggaaagtga caaacagaag tcaataaata tttttaaatg 850  
tcaaaaaaaaa aaaaaaaaaa 870

<210> 165  
<211> 119  
<212> PRT  
<213> Homo sapiens

<400> 165  
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg	20	25	30
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu	35	40	45
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro	50	55	60
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys	65	70	75
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln	80	85	90
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln	95	100	105
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu	110	115	

<210> 166

<211> 551

<212> DNA

<213> Homo sapiens

<400> 166

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ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150
cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200
ccatgtccag gagcacagga tttatggaat ttgatgataa tgaaggaaaa 250
cattcatcaa agtgacatcc tcaggacaca ccatgtggc tcttggaaca 300
tccaagagca gccaaatcct gcttttccag tttgggtcca caagtcctcc 350
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tggttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450
ttttagaag ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500
agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
a 551

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<210> 167

<211> 87

<212> PRT

<213> Homo sapiens

<400> 167

Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu	1	5	10	15
Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro				

	20		25		30
Asp Asp Lys Pro Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe	35		40		45
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala	50		55		60
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met	65		70		75
Glu Phe Asp Asp Asn Glu Gly Lys His Ser Ser Lys	80		85		

<210> 168  
 <211> 1371  
 <212> DNA  
 <213> Homo sapiens

<400> 168  
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 gcagctgctg gtgctgcttc ttaccctgcc cctgcacetc atggctctgc 150  
 tgggctgctg gcagccctg tgcaaaagct acttccccta cctgatggcc 200  
 gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250  
 cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300  
 tggagctggg ctgcggaacc ggagccaact ttcagtctta ccacccgggc 350  
 tgcagggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400  
 aaagagcatg gctgagaaca ggcacctcca atatgagcgg ttgtggtgg 450  
 ctctcggaga ggacatgaga cagctggctg atggctccat ggatgtggtg 500  
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 gagcccacct ggaaacacat tggggatggc tgctgcctca ccagagagac 700  
 ctggaaggat cttgagaacg ccagtttctc cgaatccaa atggaacgac 750  
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 cagcctccaa ttagaacaag ccacccacca gcctatctat ctccactga 900  
 gagggaccta gcagaatgag agaagacatt catgtaccac ctactagtcc 950  
 ctctctcccc aacctctgcc agggcaatct ctaacttcaa tcccgccttc 1000  
 gacagtga aaagctctact tctacgtgta cccaggaggg aaacactagg 1050  
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gcctccaat gttgtccctt tccttgcgtc ccatggtaaa gctcctctcg 1150  
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 tcatgggtgc tgcateccctg ccaagccccc ctgaccctct ctecccacta 1250  
 ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgtgggg 1300  
 atgccaagagc aagactcaaa gaggcagagg ttttgttctc aaatattttt 1350  
 taataaatag acgaaaccac g 1371

<210> 169  
 <211> 277  
 <212> PRT  
 <213> Homo sapiens

<400> 169  
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 1 5 10  
 Thr Leu Pro Leu His Leu Met Ala Leu Leu Gly Cys Trp Gln Pro 30  
 20 25  
 Leu Cys Lys Ser Tyr Phe Pro Tyr Leu Met Ala Val Leu Thr Pro 45  
 35 40  
 Lys Ser Asn Arg Lys Met Glu Ser Lys Lys Arg Glu Leu Phe Ser 60  
 50 55  
 Gln Ile Lys Gly Leu Thr Gly Ala Ser Gly Lys Val Ala Leu Leu 75  
 65 70  
 Glu Leu Gly Cys Gly Thr Gly Ala Asn Phe Gln Phe Tyr Pro Pro 90  
 80 85  
 Gly Cys Arg Val Thr Cys Leu Asp Pro Asn Pro His Phe Glu Lys 105  
 95 100  
 Phe Leu Thr Lys Ser Met Ala Glu Asn Arg His Leu Gln Tyr Glu 120  
 110 115  
 Arg Phe Val Val Ala Pro Gly Glu Asp Met Arg Gln Leu Ala Asp 135  
 125 130  
 Gly Ser Met Asp Val Val Val Cys Thr Leu Val Leu Cys Ser Val 150  
 140 145  
 Gln Ser Pro Arg Lys Val Leu Gln Glu Val Arg Arg Val Leu Arg 165  
 155 160  
 Pro Gly Gly Val Leu Phe Phe Trp Glu His Val Ala Glu Pro Tyr 180  
 170 175  
 Gly Ser Trp Ala Phe Met Trp Gln Gln Val Phe Glu Pro Thr Trp 195  
 185 190  
 Lys His Ile Gly Asp Gly Cys Cys Leu Thr Arg Glu Thr Trp Lys 210  
 200 205  
 Asp Leu Glu Asn Ala Gln Phe Ser Glu Ile Gln Met Glu Arg Gln 225  
 215 220

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly  
 230 235 240  
 Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys  
 245 250 255  
 Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile  
 260 265 270  
 Tyr Leu Pro Leu Arg Gly Thr  
 275

<210> 170  
 <211> 1621  
 <212> DNA  
 <213> Homo sapiens

<400> 170  
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 agcttctgta gataaggggt aaaaactaat atttatatga cagaagaaaa 150  
 agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgct 200  
 ctctctttac tgggttttga ccataacttc ctacgttga gcagtttggt 250  
 aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300  
 ttgtcccaaa tgctctccga catgcagtag atgggagaca agaggagatt 350  
 cctgtgtgtca tggctgcatc tgaagacagg cttggggggg ccattgcagc 400  
 tataaacagc attcagcaca acactcgctc caatgtgatt ttctacattg 450  
 ttactctcaa caatacagca gaccatctcc ggtcctggct caacagtgat 500  
 tccctgaaaa gcatcagata caaaattgtc aattttgacc ctaaaacttt 550  
 ggaaggaaaa gttaaaggag atcctgacca gggggaatcc atgaaacott 600  
 taacotttgc aaggttctac ttgccaatcc tggttcccag cgcaaagaag 650  
 gccatataca tggatgatga tgtaattgtg caaggtgata ttcttgccct 700  
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 aattacattg gctatcttga ctataaaaag gaaagaattc gtaagctttc 850  
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gaagccatgg ggaaggactg cttcatatac tgatgtttgg gaaaaatggt 1200  
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aggaagtctc ggaagatagc atgcatggga agtaacagtt gctaggcttc 1350  
aatgcctatc ggtagcaagc catggaaaaa gatgtgtcag ctaggtaaag 1400  
atgacaaact gccctgtctg gcagtcagct tcccagacag actatagact 1450  
ataaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500  
aatgactgga aagaagaact gatatggcta gttcagctag ctggtacaga 1550  
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taataaaaac ttacattttt c 1621

<210> 171  
<211> 371  
<212> PRT  
<213> Homo sapiens

<400> 171  
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Ala Leu Phe Leu Leu Val Leu His His Asn Phe Leu Ser Leu Ser  
20 25 30  
Ser Leu Leu Arg Asn Glu Val Thr Asp Ser Gly Ile Val Gly Pro  
35 40 45  
Gln Pro Ile Asp Phe Val Pro Asn Ala Leu Arg His Ala Val Asp  
50 55 60  
Gly Arg Gln Glu Glu Ile Pro Val Val Ile Ala Ala Ser Glu Asp  
65 70 75  
Arg Leu Gly Gly Ala Ile Ala Ala Ile Asn Ser Ile Gln His Asn  
80 85 90  
Thr Arg Ser Asn Val Ile Phe Tyr Ile Val Thr Leu Asn Asn Thr  
95 100 105  
Ala Asp His Leu Arg Ser Trp Leu Asn Ser Asp Ser Leu Lys Ser  
110 115 120  
Ile Arg Tyr Lys Ile Val Asn Phe Asp Pro Lys Leu Leu Glu Gly  
125 130 135  
Lys Val Lys Glu Asp Pro Asp Gln Gly Glu Ser Met Lys Pro Leu  
140 145 150  
Thr Phe Ala Arg Phe Tyr Leu Pro Ile Leu Val Pro Ser Ala Lys  
155 160 165  
Lys Ala Ile Tyr Met Asp Asp Asp Val Ile Val Gln Gly Asp Ile  
170 175 180  
Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly His Ala Ala Ala



	185		190		195
Phe Ser Glu Asp Cys Asp Ser Ala Ser Thr Lys Val Val Ile Arg	200		205		210
Gly Ala Gly Asn Gln Tyr Asn Tyr Ile Gly Tyr Leu Asp Tyr Lys	215		220		225
Lys Glu Arg Ile Arg Lys Leu Ser Met Lys Ala Ser Thr Cys Ser	230		235		240
Phe Asn Pro Gly Val Phe Val Ala Asn Leu Thr Glu Trp Lys Arg	245		250		255
Gln Asn Ile Thr Asn Gln Leu Glu Lys Trp Met Lys Leu Asn Val	260		265		270
Glu Glu Gly Leu Tyr Ser Arg Thr Leu Ala Gly Ser Ile Thr Thr	275		280		285
Pro Pro Leu Leu Ile Val Phe Tyr Gln Gln His Ser Thr Ile Asp	290		295		300
Pro Met Trp Asn Val Arg His Leu Gly Ser Ser Ala Gly Lys Arg	305		310		315
Tyr Ser Pro Gln Phe Val Lys Ala Ala Lys Leu Leu His Trp Asn	320		325		330
Gly His Leu Lys Pro Trp Gly Arg Thr Ala Ser Tyr Thr Asp Val	335		340		345
Trp Glu Lys Trp Tyr Ile Pro Asp Pro Thr Gly Lys Phe Asn Leu	350		355		360
Ile Arg Arg Tyr Thr Glu Ile Ser Asn Ile Lys	365		370		

<210> 172

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 71, 76, 86, 91, 162, 220, 269, 281

<223> unknown base

<400> 172

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aatgttctcc gacatgcagt agatgggaga caagaggaga ttctgttggt 150

catcgctgca tntgaagaca ggcttggggg ggcattgca gctataaaca 200

gcattcagca caaactcogn tccaatgtga tttctacat tgttactctc 250

aacaatacag cagacatnt cgggtcctgg ntcaacagtg attccctgaa 300

aagcatcaga tacaaaattg tcaattttga ccctaaactt ttggaaggaa 350

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catggatgat gatgtaattg tgcaagggtga tattcttgcc ctttacaata 500  
cagcactgaa gccaggacat gcagctgcat ttccagaaga ttgtgattca 550  
gcctctacta aagttgtcat cctgggagca ggaaa 585

<210> 173

<211> 1866

<212> DNA

<213> Homo sapiens

<400> 173

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aacgcgggcg gccagacaac gggctgggct cgggggctg cggcgcgggc 150  
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tcacatcact ttccgatcac ttcaaatggg ttaaaaaacta atatttatat 350  
gacagaagaa aaagatgtca ttccgtaaaag taaacatcat catcttggtc 400  
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tgaggcagtt tgtaaggaa tgaggttaca gattcaggaa ttgtagggcc 500  
tcaacctata ggactttgtc ccaaatgctc tccgacatgc agtagatggg 550  
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ttgaccctaa acttttgga gaaaagtaa aggaggatcc tgaccagggg 800  
gaatccatga aacctttaac ctttgcaagg ttctacttgc caattctggg 850  
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ggtgatattc ttgcccttta caatacagca ctgaagccag gacatgcagc 950  
tgcatattta gaagattgtg attcagcctc tactaaagtt gtcacccgtg 1000  
gagcaggaaa ccagtacaat tacattggct atcttgacta taaaaggaa 1050  
agaattcgta agctttccat gaaagccagc acttgctcat ttaactcctg 1100  
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aactggaaaa atggatgaaa ctcaatgtag aagagggact gtatagcaga 1200

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gtgctggaaa	acgatattca	cctcagtttg	taaaggctgc	caagttactc	1350
cattggaatg	gacatttgaa	gccatgggga	aggactgctt	catatactga	1400
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atccgaagat	ataccgagat	ctcaaacata	aagtgaacaa	gaatttgaa	1500
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taacagttgc	taggcttcaa	tgctatcgg	tagcaagcca	tggaaaaaga	1600
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ccagacagac	tatagactat	aaatatgtct	ccatctgcct	taccaagtgt	1700
ttcttacta	caatgtcgaa	tgactggaaa	gaagaactga	tatggctagt	1750
tcagctagct	ggtacagata	attcaaaact	gctgttggtt	ttaattttgt	1800
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<210> 174
<211> 823
<212> DNA
<213> Homo sapiens
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 gatgcattca aaatcttgto caagaactca agtcacttta catctattaa 1150  
 ctgctttgga gacttcataa tttttctagg aaaggtgtta gtgggtgtgt 1200  
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<210> 177  
 <211> 445  
 <212> PRT  
 <213> Homo sapiens

<400> 177  
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 Leu Leu Val His Ile Phe Ile Ser Leu Val Ile Leu Gly Leu Leu  
 35 40 45  
 Phe Val Cys Gly Val Leu Trp Trp Leu Tyr Tyr Asp Tyr Thr Asn  
 50 55 60  
 Asp Leu Ser Ile Glu Leu Asp Thr Glu Arg Glu Asn Met Lys Cys  
 65 70 75  
 Val Leu Gly Phe Ala Ile Val Ser Thr Gly Ile Thr Ala Val Leu  
 80 85 90  
 Leu Val Leu Ile Phe Val Leu Arg Lys Arg Ile Lys Leu Thr Val

	95		100		105
Glu Leu Phe Gln	Ile Thr Asn Lys Ala	Ile Ser Ser Ala Pro	Phe		
	110		115		120
Leu Leu Phe Gln	Pro Leu Trp Thr Phe	Ala Ile Leu Ile Phe	Phe		
	125		130		135
Trp Val Leu Trp	Val Ala Val Leu Leu	Ser Leu Gly Thr Ala	Gly		
	140		145		150
Ala Ala Gln Val	Met Glu Gly Gly Gln	Val Glu Tyr Lys Pro	Leu		
	155		160		165
Ser Gly Ile Arg	Tyr Met Trp Ser Tyr	His Leu Ile Gly Leu	Ile		
	170		175		180
Trp Thr Ser Glu	Phe Ile Leu Ala Cys	Gln Gln Met Thr Ile	Ala		
	185		190		195
Gly Ala Val Val	Thr Cys Tyr Phe Asn	Arg Ser Lys Asn Asp	Pro		
	200		205		210
Pro Asp His Pro	Ile Leu Ser Ser Leu	Ser Ile Leu Phe Phe	Tyr		
	215		220		225
His Gln Gly Thr	Val Val Lys Gly Ser	Phe Leu Ile Ser Val	Val		
	230		235		240
Arg Ile Pro Arg	Ile Ile Val Met Tyr	Met Gln Asn Ala Leu	Lys		
	245		250		255
Glu Gln Gln His	Gly Ala Leu Ser Arg	Tyr Leu Phe Arg Cys	Cys		
	260		265		270
Tyr Cys Cys Phe	Trp Cys Leu Asp Lys	Tyr Leu Leu His Leu	Asn		
	275		280		285
Gln Asn Ala Tyr	Thr Thr Ala Ile	Asn Gly Thr Asp Phe	Cys		
	290		295		300
Thr Ser Ala Lys	Asp Ala Phe Lys Ile	Leu Ser Lys Asn Ser	Ser		
	305		310		315
His Phe Thr Ser	Ile Asn Cys Phe Gly	Asp Phe Ile Ile Phe	Leu		
	320		325		330
Gly Lys Val Leu	Val Val Cys Phe Thr	Val Phe Gly Gly Leu	Met		
	335		340		345
Ala Phe Asn Tyr	Asn Arg Ala Phe Gln	Val Trp Ala Val Pro	Leu		
	350		355		360
Leu Leu Val Ala	Phe Phe Ala Tyr Leu	Val Ala His Ser Phe	Leu		
	365		370		375
Ser Val Phe Glu	Thr Val Leu Asp Ala	Leu Phe Leu Cys Phe	Ala		
	380		385		390
Val Asp Leu Glu	Thr Asn Asp Gly Ser	Ser Glu Lys Pro Tyr	Phe		
	395		400		405
Met Asp Gln Glu	Phe Leu Ser Phe Val	Lys Arg Ser Asn Lys	Leu		

	410		415		420
Asn Asn Ala Arg Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu					
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Glu Gly Thr Glu Leu Gln Ala Ile Val Arg					
	440		445		

<210> 178  
 <211> 2773  
 <212> DNA  
 <213> Homo sapiens

<400> 178  
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 ttctcactat gaaggcatct gttattgaaa tgttccttgt ttgtctggtg 250  
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 gcaaacggcg attccgaatc cagaagcagc tcctggctga tgttgcccaa 1150  
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 cattgccact caccgccca gagaccactc cttctttgtg gacgagttg 2150  
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<210> 179





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Leu Ala Asp Val	Ala Gln Ala Leu Asp	Ile Gly Pro Ala Gly Pro			
	320	325			330
Leu Met Gly Val	Val Gln Tyr Gly Asp	Asn Pro Ala Thr His Phe			
	335	340			345
Asn Leu Lys Thr	His Thr Asn Ser Arg	Asp Leu Lys Thr Ala Ile			
	350	355			360
Glu Lys Ile Thr	Gln Arg Gly Gly Leu Ser	Asn Val Gly Arg Ala			
	365	370			375
Ile Ser Phe Val	Thr Lys Asn Phe Phe	Ser Lys Ala Asn Gly Asn			
	380	385			390
Arg Ser Gly Ala	Pro Asn Val Val Val	Val Met Val Asp Gly Trp			
	395	400			405
Pro Thr Asp Lys	Val Glu Glu Ala Ser	Arg Leu Ala Arg Glu Ser			
	410	415			420
Gly Ile Asn Ile	Phe Phe Ile Thr Ile	Glu Gly Ala Ala Glu Asn			
	425	430			435
Glu Lys Gln Tyr	Val Val Glu Pro Asn	Phe Ala Asn Lys Ala Val			
	440	445			450
Cys Arg Thr Asn	Gly Phe Tyr Ser Leu	His Val Gln Ser Trp Phe			
	455	460			465
Gly Leu His Lys	Thr Leu Gln Pro Leu	Val Lys Arg Val Cys Asp			
	470	475			480
Thr Asp Arg Leu	Ala Cys Ser Lys Thr	Cys Leu Asn Ser Ala Asp			
	485	490			495
Ile Gly Phe Val	Ile Asp Gly Ser Ser	Ser Val Gly Thr Gly Asn			
	500	505			510
Phe Arg Thr Val	Leu Gln Phe Val Thr	Asn Leu Thr Lys Glu Phe			
	515	520			525
Glu Ile Ser Asp	Thr Asp Thr Arg Ile	Gly Ala Val Gln Tyr Thr			
	530	535			540
Tyr Glu Gln Arg	Leu Glu Phe Gly Phe	Asp Lys Tyr Ser Ser Lys			
	545	550			555
Pro Asp Ile Leu	Asn Ala Ile Lys Arg	Val Gly Tyr Trp Ser Gly			
	560	565			570
Gly Thr Ser Thr	Gly Ala Ala Ile Asn	Phe Ala Leu Glu Gln Leu			
	575	580			585
Phe Lys Lys Ser	Lys Pro Asn Lys Arg	Lys Leu Met Ile Leu Ile			
	590	595			600
Thr Asp Gly Arg	Ser Tyr Asp Asp Val	Arg Ile Pro Ala Met Ala			

605	610	615
Ala His Leu Lys Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp	
620	625	630
Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg	
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr	
650	655	660
Val Pro Arg Ile Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln	
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Pro Arg Asn

<210> 180  
 <211> 1759  
 <212> DNA  
 <213> Homo sapiens

<400> 180  
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 agatcccgcc cactacagtt tttctctgac tctaattgat gcactggaca 200  
 ccttgctgat tttggggaat gtctcagaat tccaaagagt ggttgaagtg 250  
 ctccaggaca gcgtggactt tgatattgat gtgaacgcct ctgtgtttga 300  
 aacaaacatt cgagtggtag gaggactcct gtctgctcat ctgctctcca 350  
 agaaggctgg ggtggaagta gaggctggat ggccctgttc cgggcctctc 400  
 ctgagaatgg ctgaggaggc ggcccgaaaa ctctcccag cctttcagac 450  
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 caggagagac ccctgtcacc tgtacggcag ggattgggac cttcattgtt 550  
 gaatttgcca cctgagcag cctcactggt gaccogtgtt tgaagatgt 600  
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 gcaggcatcg gggctggcgt ggactcctac tttgagtact tgggtgaaagg 750  
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<210> 181  
 <211> 541  
 <212> PRT  
 <213> Homo sapiens

<400> 181  
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 Asp Pro Ala His Tyr Ser Phe Ser Leu Thr Leu Ile Asp Ala Leu  
 35 40 45  
 Asp Thr Leu Leu Ile Leu Gly Asn Val Ser Glu Phe Gln Arg Val  
 50 55 60  
 Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn  
 65 70 75  
 Ala Ser Val Phe Glu Thr Asn Ile Arg Val Val Gly Gly Leu Leu  
 80 85 90  
 Ser Ala His Leu Leu Ser Lys Lys Ala Gly Val Glu Val Glu Ala  
 95 100 105  
 Gly Trp Pro Cys Ser Gly Pro Leu Leu Arg Met Ala Glu Glu Ala  
 110 115 120  
 Ala Arg Lys Leu Leu Pro Ala Phe Gln Thr Pro Thr Gly Met Pro

	125		130		135
Tyr Gly Thr Val	Asn Leu Leu His Gly	Val Asn Pro Gly Glu Thr			
	140	145			150
Pro Val Thr Cys	Thr Ala Gly Ile Gly	Thr Phe Ile Val Glu Phe			
	155	160			165
Ala Thr Leu Ser	Ser Leu Thr Gly Asp	Pro Val Phe Glu Asp Val			
	170	175			180
Ala Arg Val Ala	Leu Met Arg Leu Trp	Glu Ser Arg Ser Asp Ile			
	185	190			195
Gly Leu Val Gly	Asn His Ile Asp Val	Leu Thr Gly Lys Trp Val			
	200	205			210
Ala Gln Asp Ala	Gly Ile Gly Ala Gly	Val Asp Ser Tyr Phe			
	215	220			225
Tyr Leu Val Lys	Gly Ala Ile Leu Leu	Gln Asp Lys Lys Leu Met			
	230	235			240
Ala Met Phe Leu	Glu Tyr Asn Lys Ala	Ile Arg Asn Tyr Thr Arg			
	245	250			255
Phe Asp Asp Trp	Tyr Leu Trp Val Gln	Met Tyr Lys Gly Thr Val			
	260	265			270
Ser Met Pro Val	Phe Gln Ser Leu Glu	Ala Tyr Trp Pro Gly Leu			
	275	280			285
Gln Ser Leu Ile	Gly Asp Ile Asp Asn	Ala Met Arg Thr Phe Leu			
	290	295			300
Asn Tyr Tyr Thr	Val Trp Lys Gln Phe	Gly Gly Leu Pro Glu Phe			
	305	310			315
Tyr Asn Ile Pro	Gln Gly Tyr Thr Val	Glu Lys Arg Glu Gly Tyr			
	320	325			330
Pro Leu Arg Pro	Glu Leu Ile Glu Ser	Ala Met Tyr Leu Tyr Arg			
	335	340			345
Ala Thr Gly Asp	Pro Thr Leu Leu Glu	Leu Gly Arg Asp Ala Val			
	350	355			360
Glu Ser Ile Glu	Lys Ile Ser Lys Val	Glu Cys Gly Phe Ala Thr			
	365	370			375
Ile Lys Asp Leu	Arg Asp His Lys Leu	Asn Asn Arg Met Glu Ser			
	380	385			390
Phe Phe Leu Ala	Glu Thr Val Lys Tyr	Leu Tyr Leu Leu Phe Asp			
	395	400			405
Pro Thr Asn Phe	Ile His Asn Asn Gly	Ser Thr Phe Asp Ala Val			
	410	415			420
Ile Thr Pro Tyr	Gly Glu Cys Ile Leu	Gly Ala Gly Gly Tyr Ile			
	425	430			435
Phe Asn Thr Glu	Ala His Pro Ile Asp	Leu Ala Ala Leu His Cys			

	440		445		450
Cys Gln Arg Leu Lys Glu Glu Gln Trp Glu Val Glu Asp Leu Met	455		460		465
Arg Glu Phe Tyr Ser Leu Lys Arg Ser Arg Ser Lys Phe Gln Lys	470		475		480
Asn Thr Val Ser Ser Gly Pro Trp Glu Pro Pro Ala Arg Pro Gly	485		490		495
Thr Leu Phe Ser Pro Glu Asn His Asp Gln Ala Arg Glu Arg Lys	500		505		510
Pro Ala Lys Gln Lys Val Pro Leu Leu Ser Cys Pro Ser Gln Pro	515		520		525
Phe Thr Ser Lys Leu Ala Leu Leu Gly Gln Val Phe Leu Asp Ser	530		535		540

Ser

<210> 182  
 <211> 2056  
 <212> DNA  
 <213> Homo sapiens

<400> 182  
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 gcttctctgg ccggctctag aacaattcag gottcgtctg gactcagacc 150  
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200  
 gctttatatt ggaaagaaac aatgtttctag gtcaaaactga gtctacccaa 250  
 tgcagacttt cacaatggtt ctagaagaaa tctggacaag tcttttcatg 300  
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 gtogaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500  
 cccagcagc tgggtctcac tcaactgaagg tctgtagtgt gatgtcactg 550  
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 ctcaaccatc cttacccgac ctgggatgga gatcacccaa gatggcttcc 700  
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aatcagctgc	agaaggagg	aggtggatgc	ctgtgccacg	gctgtgatgt	1150
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cagggtgaagc	cgagaacctg	gtctgcata	catggaacc	atgaggggac	1250
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cgttctctaa	ttttctctac	tgaatgggg	gaattacct	cacacctgct	1500
aaacacacac	acacagagtc	tctctctata	tatacacacg	tacacataaa	1550
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caagcccaat	gccggtgcag	aggggaaatg	cttagcgagc	tctacagtag	1800
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agacagcagg	tgaaatgtat	gtgtgcgaat	cgacgagaat	gcagaagtca	1950
gtaacatgtg	catgtttgtt	gtgctccttt	tttctgttgg	taaagtacag	2000
aattcagcaa	ataaaaagg	ccaccttgcc	caaaagcgg	aaaaaaaaa	2050
aaaaaa	2056				

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<210> 183
<211> 311
<212> PRT
<213> Homo sapiens
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<220>  
<221> N-glycosylation sites  
<222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu	
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Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp	
				20					25					30	
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	
				35					40					45	
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	
				50					55					60	
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	
				65					70					75	
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	
				80					85					90	
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	
				95					100					105	
Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	
				110					115					120	
Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	
				125					130					135	
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe	
				140					145					150	
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	
				155					160					165	
Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	
				170					175					180	
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	
				185					190					195	
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	
				200					205					210	
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu	
				215					220					225	



Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe
				230					235					240
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp
				245					250					255
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val
				260					265					270
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile
				275					280					285
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met
				290					295					300
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser				
				305					310					

<210> 184  
 <211> 808  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 654, 711, 748  
 <223> unknown base

<400> 184  
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 cctttctagc ttcctggccg gctctagaac aattcaggct tcgctgcgac 100  
 tagacctcag ctccaacata tgcattctga agaaagattg ctgagatgac 150  
 agaatgcttt attttggaaa gaaacaatgt tctaggtcaa actgagtcta 200  
 ccaaattcag aotttcacaa tggttctaga agaaatctgg acaagtcttt 250  
 tcatgtggtt tttctacgca ttgattccat gtttgcac agatgaagtg 300  
 gccattctgc ctgccctca gaacctctct gtactctcaa ccaacatgaa 350  
 gcatctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400  
 attctgtcga ataccagggg gagtacgaga gcctgtacac gagccacatc 450  
 tggatcccca gcagctggtg ctcaactcact gaaggtctct agtgtgatgt 500  
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggccca 550  
 cattgggctc acagacotca gcctggagca tctgaagca tccctttaat 600  
 agaaactcaa ccattccttac ccgacctggg atggagatca ccaaagatgg 650  
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagtcc 700  
 ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750  
 gaaccccttg cgccgctgg ggtatctctc gagaaaagag aggcccaata 800  
 tgaccacac 808

<210> 185  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 185  
aggcttcgct gcgactagac ctc 23

<210> 186  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 186  
ccaggtcggg taaggatggt tgag 24

<210> 187  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 187  
tttctacgca ttgattccat gtttgcac agatgaagt gccattctgc 50

<210> 188  
<211> 1227  
<212> DNA  
<213> Homo sapiens

<400> 188  
cggacgcgtg ggcgcgcacc tccggaacaa gccatgggtg cggcgacggt 50  
ggcagcggcg tggctgctcc tgtgggtgc ggcctgcgcg cagcaggagc 100  
aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtcg 150  
ctggagaagt accgcggatc ggtgtccctg gtggtgaatg tggccagcga 200  
gtgcggcttc acagaccagc actaccagc cctgcagcag ctgcagcgag 250  
acctgggccc ccaccacttt aacgtgctcg ccttcccctg caaccagttt 300  
ggccaacagg agcctgacag caacaaggag attgagagct ttgccgcgcg 350  
cacctacagt gtctcattcc ccatgtttag caagattgca gtcaccggta 400  
ctggtgccca tctgccttc aagtacctgg cccagacttc tgggaaggag 450  
cccacctgga acttctggaa gtacctagta gccccagatg gaaaggtggt 500  
aggggcttgg gacccaactg tgcagtga ggaggtcaga ccccgatca 550  
cagcgctcgt gaggaagctc atcctactga agcagagaaga cttataacca 600

ccgcgtctcc tcctccacca cctcatcccg cccacctgtg tggggctgac 650  
 caatgcaaac tcaaatggtg cttcaagggt agagaccacac tgactctcct 700  
 tcctttactc ttatgccatt ggtcccatca ttcttgtggg ggaaaaattc 750  
 tagtattttg attatttgaa tcttacagca acaaatagga actcctggcc 800  
 aatgagagct cttgaccagt gaatcaccag ccgatacgaa cgtcttgcca 850  
 acaaaaatgt gtggcaata gaagtatatc aagcaataat ctcccaccca 900  
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 attagtagta aatacctgtg aaagtgccta ggcagtgcca gccaaatagg 1000  
 aggcattcaa tgaacatfff ttgcataata accaaaaaat aacttgttat 1050  
 caataaaaac ttgcatccaa catgaatttc cagccgatga taatccaggc 1100  
 caaagggtta gttgtgttta tttcctctgt attattttct tcattacaaa 1150  
 agaaatgcga gttcattgta acaatccaaa caatacctca cgatataaaa 1200  
 taaaaatgaa agtatcctcc tcaaaaa 1227

<210> 189  
 <211> 187  
 <212> PRT  
 <213> Homo sapiens

<400> 189  
 Met Val Ala Ala Thr Val Ala Ala Ala Trp Leu Leu Leu Trp Ala  
 1 5 10 15  
 Ala Ala Cys Ala Gln Gln Glu Gln Asp Phe Tyr Asp Phe Lys Ala  
 20 25 30  
 Val Asn Ile Arg Gly Lys Leu Val Ser Leu Glu Lys Tyr Arg Gly  
 35 40 45  
 Ser Val Ser Leu Val Val Asn Val Ala Ser Glu Cys Gly Phe Thr  
 50 55 60  
 Asp Gln His Tyr Arg Ala Leu Gln Gln Leu Gln Arg Asp Leu Gly  
 65 70 75  
 Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly  
 80 85 90  
 Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg  
 95 100 105  
 Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val  
 110 115 120  
 Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr  
 125 130 135  
 Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala  
 140 145 150  
 Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val

	155	160	165
Glu Glu Val Arg	Pro Gln Ile Thr Ala	Leu Val Arg Lys Leu	Ile
	170	175	180

Leu Leu Lys Arg Glu Asp Leu  
185

<210> 190  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 190  
gcaggacttc tacgacttca aggc 24

<210> 191  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 191  
agtctgggcc aggtacttga aggc 24

<210> 192  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 192  
caacatccgg ggcaaaactgg tgctgctgga gaagtaccgc ggatcgggtg 50

<210> 193  
<211> 2187  
<212> DNA  
<213> Homo sapiens

<400> 193  
cggacgcgtg ggcgggccgg gacgcagggc aaagcgagcc atggctgtct 50  
acgtcgggat gctgcgcctg gggaggctgt gcgcggggag ctcgggggtg 100  
ctggggggccc gggccgcctt ctctcgagtg tggcaggaag ccaggttgca 150  
gggtgtccgc ttctcagtt ccagagaggt ggatcgcagt gtctccacgc 200  
ccatcggagg cctcagctac gttcaggggt gcacccaaaa gcattttaac 250  
agcaagactg tgggcccagt cctggagacc acagcacaga gggtcccaga 300  
acgagagggc ttggtcgtcc tccatgaaga cgtcagggtg acctttgcc 350  
aactcaagga ggaggtggac aaagctgctt ctggcctcct gagcattggc 400

ctctgcaaag gtgaccggct gggcatgtgg ggacctaact cctatgcatg 450  
 ggtgctcatg cagttggcca ccgccaggc gggcatcatt ctggtgtctg 500  
 tgaaccagc ctaccaggct atggaactgg agtatgtcct caagaagtg 550  
 ggctgcaagg ccttgtgtt cccaagcaa ttcaagacc agcaatacta 600  
 caacgtcctg aagcagatct gtccagaagt ggagaatgcc caggcagggg 650  
 ccttgaagag toagaggcto ccagatctga ccacagtcct ctcggtggat 700  
 gccccttgc cggggacct gctcctggat gaagtgtgg cggtggcag 750  
 cacacggcag catctggacc agctccaata caaccagcag ttctgtcct 800  
 gccatgacct catcaacatc cagttoacct cggggacaac aggcagcccc 850  
 aagggggcca cctctccca ctacaacatt gtcaacaact ccaacatttt 900  
 aggagagcgc ctgaaactgc atgagaagac accagagcag ttgcggatga 950  
 tcttgccaa cccctgtac cattgcctgg gttcgtggc aggcacaatg 1000  
 atgtgtctga tgtacgggtc caccctcatc ctggcctctc ccatcttcaa 1050  
 tggcaagaag gcactggagg ccatcagcag agagagaggc accttctgt 1100  
 atggtacccc cactgtgtc gtggacatct tgaaccagcc agacttctcc 1150  
 agttatgaca tctgaccat gtgtggaggt gtcattgtcg ggtccctgc 1200  
 acctccagag ttgatccgag ccatcatcaa caagataaat atgaaggacc 1250  
 tgggtggtgc ttatggaacc acagagaaca gtcccgtgac attcgcgcac 1300  
 ttccctgagg acaactgtga gcagaaggca gaaagcgtgg gcagaattat 1350  
 gcctcacacg gaggcccgga tcatgaacat ggaggcaggc acgctggcaa 1400  
 agctgaacac gcccggggag ctgtgcatcc gagggtactg cgtcatgctg 1450  
 ggctactggg gtgagcctca gaagacagag gaagcagtgg atcaggacaa 1500  
 gtggtatttg acaggagatg tcgccacaat gaatgagcag ggcttctgca 1550  
 agatcgtggg ccgctctaag gatatgatca tccgggtggg tgagaacatc 1600  
 taccgccgag agctcgagga cttctttcac acacaccga aggtgcagga 1650  
 agtgacaggt gtgggagtgaggacgatcg gatgggggaa gagatttgtg 1700  
 cctgcattcg gctgaaggac ggggaggaga ccacggtgga ggagataaaa 1750  
 gctttctgca aagggaagat ctctcacttc aagattccga agtacatcgt 1800  
 gttttgcaca aactaccccc tcaccatttc aggaaagatc cagaaattca 1850  
 aacttcgaga gcagatggaa cgacatctaa atctgtgaat aaagcagcag 1900  
 gcctgtcctg gccggttggc ttgactctct cctgtcagaa tgcaacctgg 1950  
 ctttatgcac ctatagtgtc ccagcaccca gttctgagcc aggcacatca 2000

aatgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050  
 aactgcgctg ggcacaaggt gccaaaaggc aggcagcctg cccaggccct 2100  
 cccctcctgc catccccac attccctgt ctgtccttgt gatttggcat 2150  
 aaagagcttc tgttttcttt gaaaaaaaaa aaaaaaa 2187

<210> 194  
 <211> 615  
 <212> PRT  
 <213> Homo sapiens

<400> 194  
 Met Ala Val Tyr Val Gly Met Leu Arg Leu Gly Arg Leu Cys Ala  
 1 5 10 15  
 Gly Ser Ser Gly Val Leu Gly Ala Arg Ala Ala Leu Ser Arg Ser  
 20 25 30  
 Trp Gln Glu Ala Arg Leu Gln Gly Val Arg Phe Leu Ser Ser Arg  
 35 40 45  
 Glu Val Asp Arg Met Val Ser Thr Pro Ile Gly Gly Leu Ser Tyr  
 50 55 60  
 Val Gln Gly Cys Thr Lys Lys His Leu Asn Ser Lys Thr Val Gly  
 65 70 75  
 Gln Cys Leu Glu Thr Thr Ala Gln Arg Val Pro Glu Arg Glu Ala  
 80 85 90  
 Leu Val Val Leu His Glu Asp Val Arg Leu Thr Phe Ala Gln Leu  
 95 100 105  
 Lys Glu Glu Val Asp Lys Ala Ala Ser Gly Leu Leu Ser Ile Gly  
 110 115 120  
 Leu Cys Lys Gly Asp Arg Leu Gly Met Trp Gly Pro Asn Ser Tyr  
 125 130 135  
 Ala Trp Val Leu Met Gln Leu Ala Thr Ala Gln Ala Gly Ile Ile  
 140 145 150  
 Leu Val Ser Val Asn Pro Ala Tyr Gln Ala Met Glu Leu Glu Tyr  
 155 160 165  
 Val Leu Lys Lys Val Gly Cys Lys Ala Leu Val Phe Pro Lys Gln  
 170 175 180  
 Phe Lys Thr Gln Gln Tyr Tyr Asn Val Leu Lys Gln Ile Cys Pro  
 185 190 195  
 Glu Val Glu Asn Ala Gln Pro Gly Ala Leu Lys Ser Gln Arg Leu  
 200 205 210  
 Pro Asp Leu Thr Thr Val Ile Ser Val Asp Ala Pro Leu Pro Gly  
 215 220 225  
 Thr Leu Leu Leu Asp Glu Val Val Ala Ala Gly Ser Thr Arg Gln  
 230 235 240  
 His Leu Asp Gln Leu Gln Tyr Asn Gln Gln Phe Leu Ser Cys His

	245		250		255
Asp Pro Ile Asn	Ile Gln Phe Thr Ser	Gly Thr Thr Gly Ser	Pro		
	260		265		270
Lys Gly Ala Thr	Leu Ser His Tyr Asn	Ile Val Asn Asn Ser	Asn		
	275		280		285
Ile Leu Gly Glu	Arg Leu Lys Leu His	Glu Lys Thr Pro Glu	Gln		
	290		295		300
Leu Arg Met Ile	Leu Pro Asn Pro Leu	Tyr His Cys Leu Gly	Ser		
	305		310		315
Val Ala Gly Thr	Met Met Cys Leu Met	Tyr Gly Ala Thr Leu	Ile		
	320		325		330
Leu Ala Ser Pro	Ile Phe Asn Gly Lys	Lys Ala Leu Glu Ala	Ile		
	335		340		345
Ser Arg Glu Arg	Gly Thr Phe Leu Tyr	Gly Thr Pro Thr Met	Phe		
	350		355		360
Val Asp Ile Leu	Asn Gln Pro Asp Phe	Ser Ser Tyr Asp Ile	Ser		
	365		370		375
Thr Met Cys Gly	Gly Val Ile Ala Gly	Ser Pro Ala Pro Pro	Glu		
	380		385		390
Leu Ile Arg Ala	Ile Ile Asn Lys Ile	Asn Met Lys Asp Leu	Val		
	395		400		405
Val Ala Tyr Gly	Thr Thr Glu Asn Ser	Pro Val Thr Phe Ala	His		
	410		415		420
Phe Pro Glu Asp	Thr Val Glu Gln Lys	Ala Glu Ser Val Gly	Arg		
	425		430		435
Ile Met Pro His	Thr Glu Ala Arg Ile	Met Asn Met Glu Ala	Gly		
	440		445		450
Thr Leu Ala Lys	Leu Asn Thr Pro Gly	Glu Leu Cys Ile Arg	Gly		
	455		460		465
Tyr Cys Val Met	Leu Gly Tyr Trp Gly	Glu Pro Gln Lys Thr	Glu		
	470		475		480
Glu Ala Val Asp	Gln Asp Lys Trp Tyr	Trp Thr Gly Asp Val	Ala		
	485		490		495
Thr Met Asn Glu	Gln Gly Phe Cys Lys	Ile Val Gly Arg Ser	Lys		
	500		505		510
Asp Met Ile Ile	Arg Gly Gly Glu Asn	Ile Tyr Pro Ala Glu	Leu		
	515		520		525
Glu Asp Phe Phe	His Thr His Pro Lys	Val Gln Glu Val Gln	Val		
	530		535		540
Val Gly Val Lys	Asp Asp Arg Met Gly	Glu Glu Ile Cys Ala	Cys		
	545		550		555
Ile Arg Leu Lys	Asp Gly Glu Glu Thr	Thr Val Glu Glu Ile	Lys		

560	565	570
Ala Phe Cys Lys Gly Lys Ile Ser His Phe Lys Ile Pro Lys Tyr		
575	580	585
Ile Val Phe Val Thr Asn Tyr Pro Leu Thr Ile Ser Gly Lys Ile		
590	595	600
Gln Lys Phe Lys Leu Arg Glu Gln Met Glu Arg His Leu Asn Leu		
605	610	615

<210> 195  
 <211> 642  
 <212> DNA  
 <213> Homo sapiens

<400> 195  
 caactccaac attttaggag agcgctgaa actgcatgag aagacaccag 50  
 agcagttgag gatgacctg cccaaccccc tgtaccattg cctgggttcc 100  
 gtggcaggca caatgatgtg tctgatgtac ggtgccacc tcactctggc 150  
 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200  
 gaggcacatt cctgtatggt acccccacga tgttcgtgga cattctgaac 250  
 cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300  
 tgctgggtcc cctgcacctc cagagttgat ccgagccatc atcaacaaga 350  
 taaatatgaa ggacctggtg gttgcttatg gaaccacaga gaacagtccc 400  
 gtgacattcg cgcaactccc tgaggacact gtggagcaga aggcagaaag 450  
 cgtgggcaga attatgcctc acacggaggc gcgatcatg aacatggagg 500  
 cagggagcgt ggcaaagctg aacacgcccg gggagctgtg catccgaggg 550  
 tactgcgtca tgctgggcta ctggggtgag cctcagaaga cagaggaagc 600  
 agtggatcag gacaagtgtt attggacagg agatgtcgcc ac 642

<210> 196  
 <211> 1575  
 <212> DNA  
 <213> Homo sapiens

<400> 196  
 gagcaggacg gagccatgga ccccgccagg aaagcaggtg ccaggccat 50  
 gatctggact gcaggctggc tgctgtgtgt gctgcttcgc ggaggagcgc 100  
 aggccttgga gtgctacagc tgcgtgcaga aagcagatga cggatgtctc 150  
 ccgaacaaga tgaagacagt gaagtgcgcg ccgggctgtg acgtctgcac 200  
 cgaggccgtg ggggctgttg agaccatcca cggacaattc tcgctggcag 250  
 tgcggggttg cggttcggga ctccccggca agaatacgcc cggcctggat 300  
 cttcacgggc ttctggcggt catccagctg cagcaatgag ctcaggatcg 350



ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac cgggcaggt 400  
 atgagagtgc ataccgccc aacggcgtgg agtgctacag ctgtgtgggc 450  
 ctgagccggg aggcgtgcca gggtagatcg ccgcccgtcg tagctgcta 500  
 caacgccagc gatcatgtct acaagggctg cttcgacggc aacgtcaact 550  
 tgacggcgagc taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600  
 gatgaattct gaactcggga tggagtaaca gggccagggt tcacgctcag 650  
 ttggtcctgt tgccaggggt cccgctgtaa ctctgacctc cgcaacaaga 700  
 cctactcttc cctctgaatc ccaccccttg tccggctgcc cctccagag 750  
 cccaagactg tggcctcaac cacatctgtc accacttcta cctcgccccc 800  
 agtgagaccc acatccacca ccaaacccat gccagcgcca accagtca 850  
 ctccgagaca gggagtagaa cacgaggcct ccggggatga ggagcccagg 900  
 ttgactggag gcgcccgtgg ccaccaggac cgcagcaatt cagggcagta 950  
 tctcgaaaaa gggggggccc agcagcccca taataaaggc tgtgtggctc 1000  
 ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggtgccta 1050  
 ctgtgagctt ctccacctgg aaatttccct ctacactact tctctggccc 1100  
 tgggtacccc tcttctcctc acttctctgt ccaccactg gactgggctg 1150  
 gccagcccc tggttttcca acattcccca gtatcccag cttctgctgc 1200  
 gctggtttgc ggctttggga aataaaatac cgttgatat attctgccag 1250  
 ggggtgttcta gctttttgag gacagctcct gtatcctct catccttgc 1300  
 tctcgccttg tctccttgtg atgttaggac agagtggagag aagtcagctg 1350  
 tcaoggggaa ggtgagagag aggatgctaa gcttctact cactttctcc 1400  
 tagccagcct ggaacttga gcggtgggtg ggtgggacaa tgggtcccca 1450  
 ctctaagcac tgcctccctc actcccccga tctttgggga atcggttccc 1500  
 catatgtctt ccttactaga ctgtgagctc ctogaggggg gggccggtac 1550  
 ccaattgcc ctatagttag tcgta 1575

<210> 197

<211> 346

<212> PRT

<213> Homo sapiens

<400> 197

Met	Asp	Pro	Ala	Arg	Lys	Ala	Gly	Ala	Gln	Ala	Met	Ile	Trp	Thr
1					5				10					15
Ala	Gly	Trp	Leu	Leu	Leu	Leu	Leu	Arg	Gly	Gly	Ala	Gln	Ala	
			20					25				30		
Leu	Glu	Cys	Tyr	Ser	Cys	Val	Gln	Lys	Ala	Asp	Asp	Gly	Cys	Ser

[illegible]

<210> 198  
 <211> 1657  
 <212> DNA  
 <213> Homo sapiens

<400> 198  
 cgggactcgg cgggtcctcc tgggagtctc ggaggggacc ggctgtgcag 50  
 acgccatgga gttggtgctg gtcttctctc gcagcctgct ggcgcccatg 100  
 gtcttgcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150  
 tgattaccag accctgagga ttgggggact ggtgttcgct gtggtcctct 200  
 tctcgtgttg gatcctcctt atcctaagtc gcaggtgcaa gtgcagtttc 250  
 aatcagaagc ccggggcccc aggagatgag gaagcccagg tggagaacct 300  
 catcacccgc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350  
 catcaggtag aagcctctgg aacctgaggc ggctgcttga acctttggat 400  
 gcaaattgct atgcttaaga aaaccggcca cttcagcaac agccctttcc 450  
 ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctctaacac 500  
 cattctcca cctgatgatg caactaacac ttgcctcccc actgcagcct 550  
 gcggtctcgc ccacctcccg tgatgtgtgt gtgtgtgtgt gtgtgtgact 600  
 gtgtgtgttt gctaactgtg gtctttgttg ctacttgttt gtggatggta 650  
 ttgtgtttgt tagtgaactg tggactcgtc ttccaggca ggggctgagc 700  
 cacatggcca tctgctctc cctgcccccg tggccctcca tcacctctg 750  
 ctctaggag gctgcttgtt gcccgagacc agccccctcc cctgatttag 800  
 ggatgcgtag ggaagagca cgggcagtgg tcttcagtc tcttgggacc 850  
 tgggaaggtt tgcagcaact tgcacatatt cttcatggac tcctttcact 900  
 cctttaacaa aaaccttgct tccttatccc acctgatccc agtctgaagg 950  
 tctcttagca actggagata caaagcaagg agctggtgag ccagcgttg 1000  
 agctcaggca ggctatgcc ttccgtgggt aatttcttc caggggcttc 1050  
 caccgagggt ccccatctgc ccgcccctt cacagagcgc cgggggattc 1100  
 caggccccag gcttctactc tgcccctggg gaatgtgtcc cctgcatac 1150  
 ttctcagcaa taactccatg ggctctggga ccctacccct tccaaccttc 1200  
 cctgcttctg agacttcaat ctacagccca gtcacccag atgcagacta 1250  
 cagtcctcgc aattgggtct ctggcaggca atagttgaag gactcctgtt 1300  
 ccgttggggc cagcacaccg ggatggatgg agggagagca gaggcctttg 1350  
 cttctctgcc tacgtccctc tagatgggca gcagaggcaa ctccgcctc 1400

ctttgctctg cctgtcgggtg gtcagagcgg tgagcgaggt gggttgaga 1450  
ctcagcaggc tccgtgcagc ccttggaac agtgagaggt tgaaggtcat 1500  
aacgagagtg ggaactcaac ccagatcccgc cccctcctgt cctctgtgtt 1550  
cccgcggaac ccaaccaaac cgtgcgctgt gaccattgc tgttctctgt 1600  
atcgtgatct atcctcaaca acaacagaaa aaaggaataa aatatccttt 1650  
gtttcct 1657

<210> 199  
<211> 120  
<212> PRT  
<213> Homo sapiens

<400> 199  
Met Glu Leu Val Leu Val Phe Leu Cys Ser Leu Leu Ala Pro Met  
1 5 10 15  
Val Leu Ala Ser Ala Ala Glu Lys Glu Lys Glu Met Asp Pro Phe  
20 25 30  
His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala  
35 40 45  
Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg  
50 55 60  
Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Glu  
65 70 75  
Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro  
80 85 90  
Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp  
95 100 105  
Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala  
110 115 120

<210> 200  
<211> 415  
<212> DNA  
<213> Homo sapiens

<400> 200  
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cctcctgtgt ctccactctg cccagggagc caccctgggt ggtcctgagg 100  
aagaaagcac cattgagaat tatgcgtcac gaccgaggc cttaacacc 150  
cogttcctga acatcgacaa attgcgatct gcgtttaagg ctgatgagtt 200  
cctgaactgg cagccctct ttgagtctat caaaaggaaa ctctctttcc 250  
tcaactggga tgcctttcct aagctgaaag gactgaggag cgcaactcct 300  
gatgccagtg gaccatgacc tccactggaa gagggggcta gcgtgagcgc 350  
tgattctcaa cctaccataa ctctttcctg cctcaggaac tccaataaaa 400

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met Lys Ile Pro Val Leu Pro Ala Val Val Leu Leu Ser Leu Leu  
1 5 10 15

Val Leu His Ser Ala Gln Gly Ala Thr Leu Gly Gly Pro Glu Glu  
20 25 30

Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn  
35 40 45

Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala  
50 55 60

Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg  
65 70 75

Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly  
80 85 90

Leu Arg Ser Ala Thr Pro Asp Ala Gln  
95

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

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ggtggagatt gcttttgctt cagtgattct cactgcctc tcccttctgg 100

cagcaggagt ctcccagggt gttcttctcc agccagttcc aactcaggag 150

acagggtcca aggccatggg agatctctcc tgtggctttg ccggccaactc 200

atgagagtgt ttttgtgtaa agtatttttt agaatactgt tgacttcttc 250

atgatttaat aaccatcctt tgcgaagttt tatgaggctt taggggaatg 300

tcaaccctca aatttttggt atactagatg gcttccattt acccaccact 350

attttaaggt ccttttattt ttaggttcaa ggttcatttg acttgagaaa 400

gtgccttctt gcagcttcat tgattttggt tatcttctact attaatgtga 450

acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500

cctgggtgcc cctgacacat ttatgtagt atccacaaa tgtgattggt 550

aatttaaagt ttattctaatt attagtacat tcagttgtga tgtaatatga 600

ataaccagaa tctatttctt aaaagttttg agtatatttt tcaactagat 650

atttgatatg aaagactgaa tagtgatg 678

<210> 203  
 <211> 52  
 <212> PRT  
 <213> Homo sapiens

<400> 203  
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu  
 1 5 10 15  
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro  
 20 25 30  
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser  
 35 40 45  
 Cys Gly Phe Ala Gly His Ser  
 50

<210> 204  
 <211> 1917  
 <212> DNA  
 <213> Homo sapiens

<400> 204  
 ggggaatctg cagtaggtct gccggcgatg gagggtggg ctagctcgcc 50  
 gcttcggctc tggctgctgt tgttcctcct gccctcagcg cagggccgcc 100  
 agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150  
 tctttgaga attacgaacc atgttcaagt caaaactgca gctgctacca 200  
 tgggtgcata gaagaggatc taactccttt ccgaggaggc atctccagga 250  
 agatgatggc agaggtagtc agacggaagc tagggaccca ctatcagatc 300  
 actaagaaca gactgtaccg ggaaaatgac tgcatgttcc cctcaagggtg 350  
 tagtggtgtt gagcacttta ttttgaagt gatcgggctg ctccctgaca 400  
 tggagatggt gatcaatgta cgagattatc ctcagggtcc taaatggatg 450  
 gagcctgcca tcccagtcct ctccctcagt aagacatcag agtaccatga 500  
 tatcatgtat cctgcttgga catTTTTGGGA agggggacct gctgtttggc 550  
 caatttatcc tacaggctct ggacggtggg acctcttcag agaagatctg 600  
 gtaaggctcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650  
 ttcccgagga tcaaggacaa gtccagaacg agatcctctc attcttctgt 700  
 ctccgaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750  
 tggaaatcta tgaaagatac cttaggaaag ccagctgcta aggatgtcca 800  
 tcttggtgat cactgcaaat acaagtatct gtttaatttt cgaggcgtag 850  
 ctgcaagttt ccggttttaa cactctcttc tgtgtggctc acttgttttc 900  
 catgttggtg atgagtggct agaattcttc tatccacagc tgaagccatg 950  
 ggttcaatat atccagtcga aaacagatct ctccaatgtc caagagctgt 1000

tacaatttgt aaaagcaaat gatgatgtag ctcaagagat tgctgaaagg 1050  
 ggaagccagt ttattaggaa ccatttgcag atggatgaca tcacctgtta 1100  
 ctgggagaac ctcttgatg aatactctaa attcctgtct tataatgtaa 1150  
 cgagaaggaa aggttatgat caaattatto ccaaaatggt gaaaactgaa 1200  
 ctatagtagt catcatagga ccatagtcct ctttgtgga acagatctca 1250  
 gatatctac ggtgagaagc ttaccataag cttggtcct ataccttgaa 1300  
 tatctgctat caagccaaat acctggtttt ccttatcatg ctgacccag 1350  
 agcaactctt gaaaaagatt taaaatgtgt ctaatacact gatatgaagc 1400  
 agttcaactt tttggatgaa taaggaccag aaatcgtgag atgtggattt 1450  
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 tcagatcatc cacctgtgtg agtccatcac tgtgaaattg actgtgtcca 1550  
 tgtgatgatg cctttgtcc cattatttgg agcagaaaaa tcgtcatttg 1600  
 gaagtagtac aactcattgc tggaattgtg aaattattca aggcgtgatc 1650  
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 cttggggatc attctctgaa tggctcaagg aagcgtgagc catgccatgc 1750  
 aatgatgtag gagttctctt ttgtaaaacc ataaactctg ttactcagga 1800  
 ggtttctata atgccacata gaaagaggcc aattgcatga gtaattattg 1850  
 caattggatt tcaggttccc tttttgtgcc ttcatgccct acttctta 1900  
 gcctctctaa agccaaa 1917

<210> 205

<211> 392

<212> PRT

<213> Homo sapiens

<400> 205

Met	Glu	Trp	Trp	Ala	Ser	Ser	Pro	Leu	Arg	Leu	Trp	Leu	Leu	Leu
1				5					10					15
Phe	Leu	Leu	Pro	Ser	Ala	Gln	Gly	Arg	Gln	Lys	Glu	Ser	Gly	Ser
			20						25					30
Lys	Trp	Lys	Val	Phe	Ile	Asp	Gln	Ile	Asn	Arg	Ser	Leu	Glu	Asn
			35						40					45
Tyr	Glu	Pro	Cys	Ser	Ser	Gln	Asn	Cys	Ser	Cys	Tyr	His	Gly	Val
			50						55					60
Ile	Glu	Glu	Asp	Leu	Thr	Pro	Phe	Arg	Gly	Gly	Ile	Ser	Arg	Lys
			65						70					75
Met	Met	Ala	Glu	Val	Val	Arg	Arg	Lys	Leu	Gly	Thr	His	Tyr	Gln
			80						85					90
Ile	Thr	Lys	Asn	Arg	Leu	Tyr	Arg	Glu	Asn	Asp	Cys	Met	Phe	Pro





<211> 1425  
 <212> DNA  
 <213> Homo sapiens

<400> 206  
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 tttaacctcc ttgggcaact tcttgagggt atccggaggt ctggtggtcc 150  
 ggatgcccg cagggatggc tggctgcct gcaggaccgc agcatccttg 200  
 cccccctggc atgggatctg gggctcctgc ttctatttgt tgggcagcac 250  
 agcctcatgg cagctgaaag agtgaaggca tggacatccc ggtactttgg 300  
 ggtccttcag aggtcactgt atgtggcctg cactgccctg gccttgacgc 350  
 tgggtgatgc gtactgggag ccataccca aaggccctgt gttgtgggag 400  
 gctcgggctg agccatgggc cactcgggtg ccgctcctct gctttgtgct 450  
 ccatgtcatc tcttggtccc tcatctttag catccttctc gtctttgact 500  
 atgctgagct catgggcctc aaacagggtat actaccatgt gctggggctg 550  
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 ctgggccttg ctacgggctg tgatcagcaa gacctccgt acctccgggc 750  
 ccagctacaa agaaaaactc acctgctctc tcggcccccag gatggggagg 800  
 cagagtggag agctcactct ggttacaagc cctgttcttc ctctccact 850  
 gaattctaaa tcttaacat ccaggccctg gctgcttcat gccagaggcc 900  
 caaatccatg gactgaagga gatgccctt ctactacttg agactttatt 950  
 ctctgggtcc agctccatac cctaaattct gagtttcagc cactgaactc 1000  
 caagggtccac ttctaccag caaggaagag tggggtatgg aagtcactg 1050  
 tcccttact gtttagagca tgacctctc cccctcaaca gcctcctgag 1100  
 aaggaaagga tctgcctga cactccctt ggcaactgtta cttgcctctg 1150  
 cgctcagggt gtcccttctt gcaccgtgg ctctccactc aagaagggtg 1200  
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 ttgcctcacc actccggcc ctagtctctg cactcctta ggccctgcct 1300  
 ctgggctcag accccaacct agtcaagggg attcctctgc tcttaactcg 1350  
 atgacttggg gctccctgct ctcccgagga agatgctctg caggaaaata 1400  
 aaagtcagcc tttttctaaa aaaa 1425

<210> 207  
 <211> 262  
 <212> PRT  
 <213> Homo sapiens

<400> 207  
 Met Ala Pro Ala Leu Leu Leu Ile Pro Ala Ala Leu Ala Ser Phe  
 1 5 10 15  
 Ile Leu Ala Phe Gly Thr Gly Val Glu Phe Val Arg Phe Thr Ser  
 20 25 30  
 Leu Arg Pro Leu Leu Gly Gly Ile Pro Glu Ser Gly Gly Pro Asp  
 35 40 45  
 Ala Arg Gln Gly Trp Leu Ala Ala Leu Gln Asp Arg Ser Ile Leu  
 50 55 60  
 Ala Pro Leu Ala Trp Asp Leu Gly Leu Leu Leu Phe Val Gly  
 65 70 75  
 Gln His Ser Leu Met Ala Ala Glu Arg Val Lys Ala Trp Thr Ser  
 80 85 90  
 Arg Tyr Phe Gly Val Leu Gln Arg Ser Leu Tyr Val Ala Cys Thr  
 95 100 105  
 Ala Leu Ala Leu Gln Leu Val Met Arg Tyr Trp Glu Pro Ile Pro  
 110 115 120  
 Lys Gly Pro Val Leu Trp Glu Ala Arg Ala Glu Pro Trp Ala Thr  
 125 130 135  
 Trp Val Pro Leu Leu Cys Phe Val Leu His Val Ile Ser Trp Leu  
 140 145 150  
 Leu Ile Phe Ser Ile Leu Leu Val Phe Asp Tyr Ala Glu Leu Met  
 155 160 165  
 Gly Leu Lys Gln Val Tyr Tyr His Val Leu Gly Leu Gly Glu Pro  
 170 175 180  
 Leu Ala Leu Lys Ser Pro Arg Ala Leu Arg Leu Phe Ser His Leu  
 185 190 195  
 Arg His Pro Val Cys Val Glu Leu Leu Thr Val Leu Trp Val Val  
 200 205 210  
 Pro Thr Leu Gly Thr Asp Arg Leu Leu Ala Phe Leu Leu Thr  
 215 220 225  
 Leu Tyr Leu Gly Leu Ala His Gly Leu Asp Gln Gln Asp Leu Arg  
 230 235 240  
 Tyr Leu Arg Ala Gln Leu Gln Arg Lys Leu His Leu Leu Ser Arg  
 245 250 255  
 Pro Gln Asp Gly Glu Ala Glu  
 260

<210> 208  
 <211> 2095  
 <212> DNA

<213> Homo sapiens

<400> 208

ccgagcacag gagattgcct gcgttttagga ggtggctgcg ttgtgggaaa 50  
agctatcaag gaagaaattg ccaaaccatg tcttttttct tgttttcaga 100  
gtagttcaca acagatctga gtgttttaac taagcatgga atacagaaaa 150  
caacaaaaaa ctttaagcttt aatttcattc ggaattccac agttttctta 200  
gctccctgga cccggttgac ctgttggtct tcccgctgg ctgctctatc 250  
acgtggtgct ctccgactac tcaccccgag tgtaagaac ctctggctcg 300  
cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgctcttcc 350  
gagtaggatg tcactgagat ccctcaaatg gagcctcctg ctgctgtcac 400  
tcttgagttt ctttgtgatg tggtaacctc gccttcccca ctacaatgtg 450  
atagaacgcg tgaactggat gtacttctat gagtatgagc cgatttacag 500  
acaagacttt cacttcacac ttcgagagca ttcaaaactgc tctcatcaaa 550  
atccatttct ggtcattctg gtgacctccc acccttcaga tgtgaagacc 600  
aggcagacca ttagagttac ttgggggtgaa aaaaagtctt ggtggggata 650  
tgaggttctt acatttttct tattaggcca agaggctgaa aaggaagaca 700  
aaatgttggc attgtcotta gaggatgaac acccttctta tgggtacata 750  
atccgacaag attttttaga cacatataat aacctgacct tgaaaaacct 800  
tatggcattc agtggtgtaa ctgagttttg ccccaatgcc aagtaacgta 850  
tgaagacaga cactgatgtt ttcataata ctggcaattt agtgaagtat 900  
cttttaaaac taaaccactc agagaagttt ttcacaggtt atctctaat 950  
tgataattat tctatagag gattttacca aaaaacctat atttcttacc 1000  
aggagtatcc tttcaagggt tccctccat actgcagtgg gttgggttat 1050  
ataatgtcca gagatttggg gccaaaggatc tatgaaatga tgggtcacgt 1100  
aaaaccatc aagtttgaag atgtttatgt cgggatctgt ttgaatttat 1150  
taaaagtga cattoatatt ccagaagaca caaatctttt ctttctatat 1200  
agaatccatt tggatgtctg tcaactgaga cgtgtgattg cagcccatgg 1250  
cttttcttcc aaggagatca tcaacttttg gcaggctcatg ctaaggaaca 1300  
ccacatgcca ttattaactt cacattctac aaaaagccta gaagacaggt 1350  
ataccttggt gaaagtgtta aataaagtag gtactgtgga aaatccatgg 1400  
ggaggtcagt gtgctggctt aactgaact gaaactcatg aaaaaccag 1450  
actggagact ggaggggtac acttgtgatt tattagtcat gcccttcaaa 1500

gatgatattgt ggaggaatta aatataaagg aattggaggt ttttgcataa 1550  
 gaaattaata ggaccaaca atttggacat gtcattctgt agactagaat 1600  
 ttcttaaaag ggtgttactg agttataagc tcactaggct gtaaaaacaa 1650  
 aacaatgtag agttttattt attgaacaat gtagtcactt gaaggttttg 1700  
 tgtatatctt atgtggatta ccaatttaaa aatatatgta gttctgtgtc 1750  
 aaaaaacttc ttcactgaag ttatactgaa caaaatttta cctgtttttg 1800  
 gtcaattata aagtacttca agatgttgca gtatttcaca gttattatta 1850  
 tttaaaatta cttcaacttt gtgtttttaa atgttttgac gatttcaata 1900  
 caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950  
 tacttaactg atcagtttat tattgataca tcactccatt aatgtaaagt 2000  
 cataggtcat tattgcatat cagtaatctc ttggactttg ttaaataatt 2050  
 tactgtggta atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209

<211> 331

<212> PRT

<213> Homo sapiens

<400> 209

Met Ala Ser Ala Leu Trp Thr Val Leu Pro Ser Arg Met Ser Leu  
1 5 10 15

Arg Ser Leu Lys Trp Ser Leu Leu Leu Leu Ser Leu Leu Ser Phe  
20 25 30

Phe Val Met Trp Tyr Leu Ser Leu Pro His Tyr Asn Val Ile Glu  
35 40 45

Arg Val Asn Trp Met Tyr Phe Tyr Glu Tyr Glu Pro Ile Tyr Arg  
50 55 60

Gln Asp Phe His Phe Thr Leu Arg Glu His Ser Asn Cys Ser His  
65 70 75

Gln Asn Pro Phe Leu Val Ile Leu Val Thr Ser His Pro Ser Asp  
80 85 90

Val Lys Ala Arg Gln Ala Ile Arg Val Thr Trp Gly Glu Lys Lys  
95 100 105

Ser Trp Trp Gly Tyr Glu Val Leu Thr Phe Phe Leu Leu Gly Gln  
110 115 120

Glu Ala Glu Lys Glu Asp Lys Met Leu Ala Leu Ser Leu Glu Asp  
125 130 135

Glu His Leu Leu Tyr Gly Asp Ile Ile Arg Gln Asp Phe Leu Asp  
140 145 150

Thr Tyr Asn Asn Leu Thr Leu Lys Thr Ile Met Ala Phe Arg Trp  
155 160 165

Val Thr Glu Phe Cys Pro Asn Ala Lys Tyr Val Met Lys Thr Asp  
 170 175 180  
 Thr Asp Val Phe Ile Asn Thr Gly Asn Leu Val Lys Tyr Leu Leu  
 185 190 195  
 Asn Leu Asn His Ser Glu Lys Phe Phe Thr Gly Tyr Pro Leu Ile  
 200 205 210  
 Asp Asn Tyr Ser Tyr Arg Gly Phe Tyr Gln Lys Thr His Ile Ser  
 215 220 225  
 Tyr Gln Glu Tyr Pro Phe Lys Val Phe Pro Pro Tyr Cys Ser Gly  
 230 235 240  
 Leu Gly Tyr Ile Met Ser Arg Asp Leu Val Pro Arg Ile Tyr Glu  
 245 250 255  
 Met Met Gly His Val Lys Pro Ile Lys Phe Glu Asp Val Tyr Val  
 260 265 270  
 Gly Ile Cys Leu Asn Leu Leu Lys Val Asn Ile His Ile Pro Glu  
 275 280 285  
 Asp Thr Asn Leu Phe Phe Leu Tyr Arg Ile His Leu Asp Val Cys  
 290 295 300  
 Gln Leu Arg Arg Val Ile Ala Ala His Gly Phe Ser Ser Lys Glu  
 305 310 315  
 Ile Ile Thr Phe Trp Gln Val Met Leu Arg Asn Thr Thr Cys His  
 320 325 330  
 Tyr

<210> 210

<211> 745

<212> DNA

<213> Homo sapiens

<400> 210

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 caacgtcaat gatgacaaca acaatgctgg aagtgggcag cagtcagtga 150  
 gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200  
 gactcctgga attccatctg ggattatgga aatggctttg ctgcaaccag 250  
 actctttcaa aagaagacat gcattgtgca caaaatgaac aaggaagtca 300  
 tgccctccat tcaatccctt gatgcactgg tcaaggaaaa gaagcttcag 350  
 ggtaagggac caggaggaco acctccaag ggctgatgt actcagtc 400  
 cccaaacaaa gtcgatgacc tgagcaagtt cggaaaaaac attgcaaaca 450  
 tgtgtcgtgg gattccaaca tacatggctg aggagatgca agaggcaagc 500  
 ctgttttttt actcaggaaac gtgtacacag accagtgatc tatggattgt 550

ggacatttcc ttctgtggag acacggtgga gaactaaaca attttttaaa 600  
 gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650  
 tecagtggtt tttaccatgt cattctgaaa tttttctcta ctagttagt 700  
 ttgatttctt taagtttcaa taaaatcatt tagcattgaa aaaaa 745

<210> 211  
 <211> 185  
 <212> PRT  
 <213> Homo sapiens

<400> 211  
 Met Lys Phe Thr Ile Val Phe Ala Gly Leu Gly Val Phe Leu  
 1 5 10 15  
 Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn  
 20 25 30  
 Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu  
 35 40 45  
 His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp  
 50 55 60  
 Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu  
 65 70 75  
 Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val  
 80 85 90  
 Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys  
 95 100 105  
 Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Pro Lys Gly Leu Met  
 110 115 120  
 Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly  
 125 130 135  
 Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala  
 140 145 150  
 Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys  
 155 160 165  
 Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly  
 170 175 180  
 Asp Thr Val Glu Asn  
 185

<210> 212  
 <211> 1706  
 <212> DNA  
 <213> Homo sapiens

<400> 212  
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 tacagaagta tattaacttt tiaggagtaa ttctagttt ggattgtaat 100

atgaataaat	ttaaaagggc	ttogtcata	tataggaaa	tcgcatatgg	150
tcctagtatt	aaattcttat	tgtctactga	tttttttgag	ttaagagttg	200
ttatatgcta	gaatatgagg	atgtgaatat	aaataagaga	agaaaaaaga	250
ataaagtaga	ttgagtctcc	aatttttatgt	aagcttcaga	agaactgggt	300
tgtttacatg	caagcttata	gttgaaatat	ttttcaggaa	ttacatgaat	350
gacagtcttc	gaaccaatgt	gtttgttcga	tttcaaccag	agactatagc	400
atgtgcttgc	atctaccttg	cagctagagc	acttcagatt	cogttgccaa	450
ctogtcccca	ttggtttctt	ctttttggta	ctacagaaga	ggaatccag	500
gaaatctgca	tagaaacact	taggctttat	accagaaaa	agccaaacta	550
tgaattactg	gaaaaagaag	tagaaaaaag	aaaagtatgc	ttacaagaag	600
ccaaattaaa	agcaaaaggga	ttgaatccgg	atggaactcc	agccctttca	650
acccgtgggt	gattttctcc	agcctccaag	ccatcatcac	caagagaagt	700
aaaagctgaa	gagaaatcac	caatctccat	taatgtgaag	acagtcaaaa	750
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agaaaaagaca	gcaagagaag	tagaaatagc	agaagtgcac	gtcgcgcgag	850
gtcaagaaca	cgatcacgtt	ctagatcaca	tactccaaga	agacactata	900
ataataggcg	gagtcgatct	ggaacatata	gctcgagatc	aagaagcagg	950
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tcaccttaag	gccaagcata	ccagagatga	tttaaaaagt	tcaaacagac	1050
atggtcataa	aaggaaaaaa	tctgttctc	gatctcagag	caagtctcgg	1100
gatcactcag	atgcagccaa	gaaacacagg	catgaaaggg	gacatcatag	1150
ggacaggcgt	gaacgatctc	gctcctttga	gaggtcccat	aaaagcaagc	1200
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gtatggactc	aatcaaaaac	attaaacgca	aactgattag	gatttgattt	1350
cttgaaaccc	tctagggtct	tagaacaactg	aggcagattt	cttttgaaaa	1400
gaactatggt	aatttttttg	cacattaaaa	tgccctagca	gtatctaatt	1450
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atacagataa	aattgcagac	actgttctat	ttaaagtggt	attgttttaa	1600
atgatgggtga	atactttctt	aacactgggt	tgtctgcatg	tgtaagattt	1650
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aaaagt 1706

<210> 213

<211> 299

<212> PRT

<213> Homo sapiens

<400> 213

Met	Asn	Asp	Ser	Leu	Arg	Thr	Asn	Val	Phe	Val	Arg	Phe	Gln	Pro
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Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala	Leu
				20					25					30
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly
				35					40					45
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg
				50					55					60
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu
				65					70					75
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala
				80					85					90
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly
				95					100					105
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys
				110					115					120
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys
				125					130					135
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn
				140					145					150
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala
				155					160					165
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr
				170					175					180
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr
				185					190					195
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro
				200					205					210
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His
				215					220					225
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg
				230					235					240
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser
				245					250					255
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp
				260					265					270
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys



His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg  
290 295

<210> 214  
<211> 730  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663  
<223> unknown base

<400> 214  
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gcattgcttt ttacagaaat atattanctt tttagagtaa tttctagttt 150  
ggattgtaat atgaaattat ttaaaagggc ttcgctcata tataggaaaa 200  
tcgcatatgg tcctagtatt aaattnttat tgcttactga tttttttgag 250  
ttaagagttg ttatatgnta gaatatgagg atgtgaatat aaataagaga 300  
agaaaaaaga ataaagtaga ttgagctcgc aattttatgt aagcttcaga 350  
agaactgggt tgtttaccat caagcttata gttgaaatat ttttcaggaa 400  
ttacatgaat gacagctctc gaaccaatgt gtttgttcga tttcaaccag 450  
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ccgttgccaa ctngtcccca ttggtttctt ctttttggtg ctacagaaga 550  
ggaaatccag gaaatntgca tagaaacact taggctttat accagaaaaa 600  
agccaaacta tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc 650  
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agccctttca accctgggtg gatttttctcc 730

<210> 215  
<211> 1807  
<212> DNA  
<213> Homo sapiens

<400> 215  
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ccaccctcat gcacaggctg gcgccacact gctccttcgc gcgctggctg 150  
ctctgtaacg gcagtttgtt ccgatacaag caccctgctg aggaggagct 200  
tcgggccctg gcggggaagc cgaggcccag aggcagggaa gagcgggtgg 250  
ccaatggcct tagtgaggag aagccactgt ctgtgccccg agatgccccg 300





290	295	300
Thr Arg Phe Ser Leu Leu Ser Asp Ser	Ala Phe Asp Ser Gly Arg	
305	310	315
Leu Trp Leu Leu Val Val Leu Cys Leu	Leu Arg Leu Ala Val Thr	
320	325	330
Arg Pro His Leu Gln Ala Tyr Leu Cys	Leu Ala Lys Ala Arg Val	
335	340	345
Glu Gln Leu Arg Arg Glu Ala Gly Arg	Ile Glu Ala Arg Glu Ile	
350	355	360
Gln Gln Arg Val Val Arg Val Tyr Cys	Tyr Val Thr Val Val Ser	
365	370	375
Leu Gln Tyr Leu Thr Pro Leu Ile Leu	Thr Leu Asn Cys Thr Leu	
380	385	390
Leu Leu Lys Thr Leu Gly Gly Tyr Ser	Trp Gly Leu Gly Pro Ala	
395	400	405
Pro Leu Leu Ser Pro Asp Pro Ser Ser	Ala Ser Ala Ala Pro Ile	
410	415	420
Gly Ser Gly Glu Asp Glu Val Gln Gln	Thr Ala Ala Arg Ile Ala	
425	430	435
Gly Ala Leu Gly Gly Leu Leu Thr Pro	Leu Phe Leu Arg Gly Val	
440	445	450
Leu Ala Tyr Leu Ile Trp Trp Thr Ala	Ala Cys Gln Leu Leu Ala	
455	460	465
Ser Leu Phe Gly Leu Tyr Phe His Gln	His Leu Ala Gly Ser	
470	475	

<210> 217  
 <211> 574  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> unsure  
 <222> 5, 146  
 <223> unknown base

<400> 217  
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 gctggctgct ctgtaacggc agtttgttcc gatacaagca cccgtnttga 150  
 ggaggagcct cgggccctgg cggggaagcc gaggcccaaga ggcaggaaaag 200  
 agcgggtgggc caatggcctt agtgaggaga agccactgtc tgtgccccga 250  
 gatgccccgt tccagctgga gacctgcccc ctcacgaccg tggatgcctt 300  
 ggtcctgcgc ttcttctctgg agtaccagtg gtttgtggac ttgtctgtgt 350

actcgggcg cgtgtacctc ttcacagagg cctactacta catgctggga 400  
ccagccaagg agactaacat tgctgtgttc tgggtgcctgc tcacagtgc 450  
cttctccatc aagatgttcc tgacagtgc acggctgtac ttcagcgccg 500  
aggagggggg tgagcgctct gtctgcctca cctttgcctt cctcttctg 550  
ctgctggcca tgtggtgca agcg 574

<210> 218  
<211> 2571  
<212> DNA  
<213> Homo sapiens

<400> 218  
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ttgtgatcta ctgattgtgg ggcatggca aggtttgctt aaaggagctt 150  
ggctgggttg ggcccttgta gctgacagaa ggtggccagg gagaatgcag 200  
cacactgctc ggagaatgaa ggcgcttctg ttgctggtct tgccttggtc 250  
cagtcctgct aactacattg acaatgtggg caacctgcac ttcctgtatt 300  
cagaactctg taaagggtgc tccactacg gctgaccaa agataggaag 350  
aggcgctcac aagatggctg tccagacggc tgtgcgagcc tcacagccac 400  
ggctccctcc ccagagggtt ctgcagctgc caccatctcc ttaatgacag 450  
acgagcctgg cctagacaac cctgcctacg tgtcctcgcc agaggacggg 500  
cagccagcaa tcagcccgat ggactctggc cggagcaacc gaactagggc 550  
acggcccttt gagagatcca ctattagaag cagatcattt aaaaaataa 600  
atcgagcttt gagtgttctt cgaaggacaa agagcgggag tgcagttgcc 650  
aaccatgccg accaggggcag ggaaaattct gaaaacacca ctgccctga 700  
agtctttcca aggttgtacc acctgattcc agatggtgaa attaccagca 750  
tcaagatcaa tcgagtagat cccagtgaat gcctctctat taggctggtg 800  
ggaggtagcg aaaccccgat ggtccatctc attatccaac acatttatcg 850  
tgatgggggt atgccagag acggcgggct actgccagga gacatcattc 900  
taaagggtcaa cgggatggac atcagcaatg tccctcaca ctagctgtg 950  
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acagaagttc cgcagcagga acaatggaca ggcccgatg gcctacagac 1050  
cccagatga cagctttcat gtgattctca acaaaagtag ccccgaggag 1100  
cagcttgga taaaactggg gcgcaagggt gatgagcctg gggttttcat 1150  
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agaatgaccg tgtgttagcc atcaatggac atgatcttcg atatggcagc 1250  
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cgtcgtgtcc cgccagggtc ggagcggag cctgacatc tttcaggaa 1350  
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aaatatccaa aaagaccccg gtgaatctct cgcatgacc gtgcaggagg 1500  
gagcatcaca tagagaatgg gatttgctta tctatgtcat cagtgttgag 1550  
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tgtggctgga attaccacgg tgcttgata actgtaaaga tattgtatta 1850  
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caccagcata caatgatgga agaattagat gtgggtatat tcttcttgct 2000  
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gcacttttt atagaatcaa tgatgggtca gaggaacaca gaaaaatcac 2150  
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ctagtttttt ttcagtgtgg aggatttctc attactctac aacattgttt 2350  
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tgtatacccc actgaattca agctgattta aatttaaaat ttggtatatg 2450  
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aaatattttt cagaagttaa a 2571

<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

Met Lys Ala Leu Leu Leu Val Leu Pro Trp Leu Ser Pro Ala

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				20					25					30	
Leu	Cys	Lys	Gly	Ala	Ser	His	Tyr	Gly	Leu	Thr	Lys	Asp	Arg	Lys	
				35					40					45	
Arg	Arg	Ser	Gln	Asp	Gly	Cys	Pro	Asp	Gly	Cys	Ala	Ser	Leu	Thr	
				50					55					60	
Ala	Thr	Ala	Pro	Ser	Pro	Glu	Val	Ser	Ala	Ala	Ala	Thr	Ile	Ser	
				65					70					75	
Leu	Met	Thr	Asp	Glu	Pro	Gly	Leu	Asp	Asn	Pro	Ala	Tyr	Val	Ser	
				80					85					90	
Ser	Ala	Glu	Asp	Gly	Gln	Pro	Ala	Ile	Ser	Pro	Val	Asp	Ser	Gly	
				95					100					105	
Arg	Ser	Asn	Arg	Thr	Arg	Ala	Arg	Pro	Phe	Glu	Arg	Ser	Thr	Ile	
				110					115					120	
Arg	Ser	Arg	Ser	Phe	Lys	Lys	Ile	Asn	Arg	Ala	Leu	Ser	Val	Leu	
				125					130					135	
Arg	Arg	Thr	Lys	Ser	Gly	Ser	Ala	Val	Ala	Asn	His	Ala	Asp	Gln	
				140					145					150	
Gly	Arg	Glu	Asn	Ser	Glu	Asn	Thr	Thr	Ala	Pro	Glu	Val	Phe	Pro	
				155					160					165	
Arg	Leu	Tyr	His	Leu	Ile	Pro	Asp	Gly	Gly	Ile	Thr	Ser	Ile	Lys	
				170					175					180	
Ile	Asn	Arg	Val	Asp	Pro	Ser	Glu	Ser	Leu	Ser	Ile	Arg	Leu	Val	
				185					190					195	
Gly	Gly	Ser	Glu	Thr	Pro	Leu	Val	His	Ile	Ile	Ile	Gln	His	Ile	
				200					205					210	
Tyr	Arg	Asp	Gly	Val	Ile	Ala	Arg	Asp	Gly	Arg	Leu	Leu	Pro	Gly	
				215					220					225	
Asp	Ile	Ile	Leu	Lys	Val	Asn	Gly	Met	Asp	Ile	Ser	Asn	Val	Pro	
				230					235					240	
His	Asn	Tyr	Ala	Val	Arg	Leu	Leu	Arg	Gln	Pro	Cys	Gln	Val	Leu	
				245					250					255	
Trp	Leu	Thr	Val	Met	Arg	Glu	Gln	Lys	Phe	Arg	Ser	Arg	Asn	Asn	
				260					265					270	
Gly	Gln	Ala	Pro	Asp	Ala	Tyr	Arg	Pro	Asp	Asp	Asp	Ser	Phe	His	
				275					280					285	
Val	Ile	Leu	Asn	Lys	Ser	Ser	Pro	Glu	Glu	Gln	Leu	Gly	Ile	Lys	
				290					295					300	
Leu	Val	Arg	Lys	Val	Asp	Glu	Pro	Gly	Val	Phe	Ile	Phe	Asn	Val	
				305					310					315	
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<210> 220  
 <211> 773  
 <212> DNA  
 <213> Homo sapiens

<400> 220  
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 gtttttaaca tcatcagccc aagcaacaat ggtggcaatg ttccaggagac 200  
 agtgacaatt gataatgaaa aaaataccgc catcgttaac atccatgcag 250  
 gatcatgctc ttctaccaca atttttgact ataacatgg ctacattgca 300  
 tccaggggtgc tctccgaag agcctgcttt atcctgaaga tggaccatca 350  
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaacacagg 400  
 ctctggacaa catgttctcc aacaaatata cctgggtcaa gtacaacct 450  
 ctggagtgct tgatcaaaga cgtggattgg ttctgcttg ggtaaccat 500  
 tgagaaaactc tgcaaacata tccctttgta taagggggaa gtggttgaaa 550  
 acacacataa tgtcgggtgct ggaggctgtg caaaggctgg gtcctcgggc 600  
 atcttgggaa tttcaatctg tgcagacatt catgtttagg atgattagcc 650  
 ctctgtgttt atcttttcaa agaaatacat ccttggttta cactcaaaag 700  
 tcaaattaaa ttctttccca atgccccaac taattttgag attcagtcag 750  
 aaaatataaa tgctgtattt ata 773

<210> 221  
 <211> 184  
 <212> PRT  
 <213> Homo sapiens

<400> 221  
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly  
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 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser  
 20 25 30  
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu  
 35 40 45  
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser  
 50 55 60  
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val  
 65 70 75  
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn  
 80 85 90

Ile Pro Pro Leu Asn Asn Leu Gln Trp Tyr Ile Tyr Glu Lys Gln  
95 100 105

Ala Leu Asp Asn Met Phe Ser Asn Lys Tyr Thr Trp Val Lys Tyr  
110 115 120

Asn Pro Leu Glu Ser Leu Ile Lys Asp Val Asp Trp Phe Leu Leu  
125 130 135

Gly Ser Pro Ile Glu Lys Leu Cys Lys His Ile Pro Leu Tyr Lys  
140 145 150

Gly Glu Val Val Glu Asn Thr His Asn Val Gly Ala Gly Gly Cys  
155 160 165

Ala Lys Ala Gly Leu Leu Gly Ile Leu Gly Ile Ser Ile Cys Ala  
170 175 180

Asp Ile His Val

<210> 222  
<211> 992  
<212> DNA  
<213> Homo sapiens

<400> 222  
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accacccagag gcatggggct ccttgggctg ttctgcttgg ccgtgtctggc 100  
tgcccagcagc ttctccaagg cacgggagga agaaattacc cctgtgtgtct 150  
ccattgccta caaagtcttg gaagtcttcc ccaaaggccg ctgggtgtctc 200  
ataaactgct gtgcacccca gccaccaccg cccatcacct attccctctg 250  
tggaaccaag aacatcaagg tggccaagaa ggtggtgaag acccacgagc 300  
cggctcctt caacctcaac gtcacactca agtcagctcc agacctgtctc 350  
acctacttct gccggggctc ctccacctca ggtgcccatg tggacagtgc 400  
caggctacag atgcactggg agctgtgtgc caagccagtg tctgagctgc 450  
gggccaactt cactctgcag gacagagggg caggccccag ggtgagatg 500  
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gaaggatggg caggtccacc tgcagcagag accatgccac aggcagcctg 600  
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tccttgccct gccgctctac aggagcaccc gccgtctgag tgaagaggag 800  
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agccatgtag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactggt cgtatttgga gttcatgcaa aatgagtgtg 950

ttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met Gly Leu Pro Gly Leu Phe Cys Leu Ala Val Leu Ala Ala Ser  
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Ser Phe Ser Lys Ala Arg Glu Glu Glu Ile Thr Pro Val Val Ser  
20 25 30

Ile Ala Tyr Lys Val Leu Glu Val Phe Pro Lys Gly Arg Trp Val  
35 40 45

Leu Ile Thr Cys Cys Ala Pro Gln Pro Pro Pro Ile Thr Tyr  
50 55 60

Ser Leu Cys Gly Thr Lys Asn Ile Lys Val Ala Lys Lys Val Val  
65 70 75

Lys Thr His Glu Pro Ala Ser Phe Asn Leu Asn Val Thr Leu Lys  
80 85 90

Ser Ser Pro Asp Leu Leu Thr Tyr Phe Cys Arg Ala Ser Ser Thr  
95 100 105

Ser Gly Ala His Val Asp Ser Ala Arg Leu Gln Met His Trp Glu  
110 115 120

Leu Trp Ser Lys Pro Val Ser Glu Leu Arg Ala Asn Phe Thr Leu  
125 130 135

Gln Asp Arg Gly Ala Gly Pro Arg Val Glu Met Ile Cys Gln Ala  
140 145 150

Ser Ser Gly Ser Pro Pro Ile Thr Asn Ser Leu Ile Gly Lys Asp  
155 160 165

Gly Gln Val His Leu Gln Gln Arg Pro Cys His Arg Gln Pro Ala  
170 175 180

Asn Phe Ser Phe Leu Pro Ser Gln Thr Ser Asp Trp Phe Trp Cys  
185 190 195

Gln Ala Ala Asn Asn Ala Asn Val Gln His Ser Ala Leu Thr Val  
200 205 210

Val Pro Pro Gly Gly Asp Gln Lys Met Glu Asp Trp Gln Gly Pro  
215 220 225

Leu Glu Ser Pro Ile Leu Ala Leu Pro Leu Tyr Arg Ser Thr Arg  
230 235 240

Arg Leu Ser Glu Glu Glu Phe Gly Gly Phe Arg Ile Gly Asn Gly  
245 250 255

Glu Val Arg Gly Arg Lys Ala Ala Ala Met  
260 265

<210> 224  
 <211> 1297  
 <212> DNA  
 <213> Homo sapiens

<400> 224  
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 <211> 246  
 <212> PRT  
 <213> Homo sapiens

<400> 225

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Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro
20          25          30

His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro
35          40          45

Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr
50          55          60

Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser
65          70          75

Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln
80          85          90

Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu
95          100          105

Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr
110          115          120

Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser
125          130          135

Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu
140          145          150

Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala
155          160          165

Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met
170          175          180

Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu
185          190          195

Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly
200          205          210

Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr
215          220          225

Ala Thr Thr Leu Ile Leu Cys Cys Leu Ile Ile Leu Pro Cys
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Phe Ile Leu Pro Gly Ile
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<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

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caagttatat accgtggaat ggagttgatac ccaaccataa catcgtggag 150

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 aaaccttgca gcaagggacc ttagataggc ttattctgac tgtatgcttt 650  
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 <211> 115  
 <212> PRT  
 <213> Homo sapiens

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 Phe His Leu Gln Asn His Glu Leu Trp Leu Leu Ile Lys Arg Glu  
 35 40 45  
 Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys  
 50 55 60  
 Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr  
 65 70 75  
 Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu  
 80 85 90  
 Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Gln  
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 Pro Thr Glu Gln His Phe Trp Ala Arg Leu  
 110 115

<210> 228  
 <211> 2185  
 <212> DNA  
 <213> Homo sapiens

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 <211> 653  
 <212> PRT  
 <213> Homo sapiens

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 Leu Cys Ala Ala Ile Ala Ala Ala Ala Ser Ala Gly Pro Gln Asn  
 35 40 45  
 Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val Val  
 50 55 60  
 Cys Thr Arg Arg Gly Leu Ser Glu Val Pro Gln Gly Ile Pro Ser  
 65 70 75  
 Asn Thr Arg Tyr Leu Asn Leu Met Glu Asn Asn Ile Gln Met Ile  
 80 85 90  
 Gln Ala Asp Thr Phe Arg His Leu His His Leu Glu Val Leu Gln  
 95 100 105  
 Leu Gly Arg Asn Ser Ile Arg Gln Ile Glu Val Gly Ala Phe Asn  
 110 115 120  
 Gly Leu Ala Ser Leu Asn Thr Leu Glu Leu Phe Asp Asn Trp Leu  
 125 130 135  
 Thr Val Ile Pro Ser Gly Ala Phe Glu Tyr Leu Ser Lys Leu Arg  
 140 145 150  
 Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser Tyr  
 155 160 165  
 Ala Phe Asn Arg Val Pro Ser Leu Met Arg Leu Asp Leu Gly Glu  
 170 175 180  
 Leu Lys Lys Leu Glu Tyr Ile Ser Glu Gly Ala Phe Glu Gly Leu



	185		190		195
Phe Asn Leu Lys Tyr	Leu Asn Leu Gly	Met Cys Asn Ile Lys Asp			
	200		205		210
Met Pro Asn Leu Thr	Pro Leu Val Gly	Leu Glu Glu Leu Glu Met			
	215		220		225
Ser Gly Asn His Phe	Pro Glu Ile Arg	Pro Gly Ser Phe His Gly			
	230		235		240
Leu Ser Ser Leu Lys	Lys Leu Trp Val	Met Asn Ser Gln Val Ser			
	245		250		255
Leu Ile Glu Arg Asn	Ala Phe Asp Gly	Leu Ala Ser Leu Val Glu			
	260		265		270
Leu Asn Leu Ala His	Asn Asn Leu Ser	Ser Leu Pro His Asp Leu			
	275		280		285
Phe Thr Pro Leu Arg	Tyr Leu Val Glu	Leu His Leu His His Asn			
	290		295		300
Pro Trp Asn Cys Asp	Cys Asp Ile Leu	Trp Leu Ala Trp Trp Leu			
	305		310		315
Arg Glu Tyr Ile Pro	Thr Asn Ser Thr	Cys Cys Gly Arg Cys His			
	320		325		330
Ala Pro Met His Met	Arg Gly Arg Tyr	Leu Val Glu Val Asp Gln			
	335		340		345
Ala Ser Phe Gln Cys	Ser Ala Pro Phe	Ile Met Asp Ala Pro Arg			
	350		355		360
Asp Leu Asn Ile Ser	Glu Gly Arg Met	Ala Glu Leu Lys Cys Arg			
	365		370		375
Thr Pro Pro Met Ser	Ser Val Lys Trp	Leu Leu Pro Asn Gly Thr			
	380		385		390
Val Leu Ser His Ala	Ser Arg His Pro	Arg Ile Ser Val Leu Asn			
	395		400		405
Asp Gly Thr Leu Asn	Phe Ser His Val	Leu Leu Ser Asp Thr Gly			
	410		415		420
Val Tyr Thr Cys Met	Val Thr Asn Val	Ala Gly Asn Ser Asn Ala			
	425		430		435
Ser Ala Tyr Leu Asn	Val Ser Thr Ala	Glu Leu Asn Thr Ser Asn			
	440		445		450
Tyr Ser Phe Phe Thr	Thr Val Thr Val	Glu Thr Thr Glu Ile Ser			
	455		460		465
Pro Glu Asp Thr Thr	Arg Lys Tyr Lys	Pro Val Pro Thr Thr Ser			
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Thr Gly Tyr Gln Pro	Ala Tyr Thr Thr	Ser Thr Thr Val Leu Ile			
	485		490		495
Gln Thr Thr Arg Val	Pro Lys Gln Val	Ala Val Pro Ala Thr Asp			



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Glu	Arg	Thr	Val	Val	Val	Ala	Ala	His	Cys	Val	Thr	Asp	Leu	Gly	500	505	510
Lys	Val	Thr	Met	Ile	Lys	Thr	Ala	Asp	Leu	Lys	Val	Val	Leu	Gly	515	520	525
Lys	Phe	Tyr	Arg	Asp	Asp	Asp	Arg	Asp	Glu	Lys	Thr	Ile	Gln	Ser	530	535	540
Leu	Gln	Ile	Ser	Ala	Ile	Ile	Leu	His	Pro	Asn	Tyr	Asp	Pro	Ile	545	550	555
Leu	Leu	Asp	Ala	Asp	Ile	Ala	Ile	Leu	Lys	Leu	Leu	Asp	Lys	Ala	560	565	570
Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg	575	580	585
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly	590	595	600
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp	605	610	615
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys	620	625	630
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp	635	640	645
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile	650	655	660
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly	665	670	675
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser	680	685	690
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe	695	700	705
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys	710	715	720

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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

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<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

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<210> 234  
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<210> 235  
<211> 1964  
<212> DNA  
<213> Homo sapiens

<400> 235  
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<211> 25  
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<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

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<210> 238  
<211> 25  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

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<211> 2567  
<212> DNA  
<213> Homo sapiens

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 ctggagactc catctgagta cctggaaatt gttcgtgaga accacgggct 1350  
 gctccggccc ctctataagt ctgtcaaac ttacaccgtg tgagcactcc 1400  
 ccctcccoac ccactctcag tgttaactga ctgctgactt ggagtcttca 1450  
 gcagggtggt gtgcaccact gaccaggagg ggttcatttg cgtggggctg 1500  
 ttggcctgga tcatocatcc atctgtacag ttcagccact gccacaagcc 1550  
 cctccctctc tgtcaccctc gaccocagcc attcaccat ctgtacagtc 1600  
 cagccactga cataagcccc actcggttac caccoccttg accocctacc 1650  
 tttgaagagg cttcgtgcag gactttgatg cttgggggtg tccgtgttga 1700  
 ctctagagtg ggctggctg cccactgccc attcctctca tattggcaca 1750  
 tctgctgtcc attgggggtt ctcagtttcc tccccagac agccctacct 1800  
 gtgcacagaga gctagaaaga aggtcataaa gggttaaaaa tccataacta 1850  
 aagggtgtac acatagatgg gcacactcac agagagaagt gtgcagtac 1900  
 acacaccaca cacacacaca cacacacaca cacagaaata taaacacatg 1950  
 cgtcacatgg gcatttcaga tgatcagctc tgtatctggt taagtcgggt 2000  
 gctgggagtc accctgcact agagctgaaa ggaatttga cctccaagca 2050  
 gccctgacag gttctgggcc cgggccctcc ctttgtgctt tgtctctgca 2100  
 gttctctgcg cctttataag gccatcctag tcctgtctgg ctggcagggg 2150

cctggatggg gggcaggact aatactgagt gattgcagag tgctttataa 2200  
 atatcacctt attttatcga aacccatctg tgaaccttc actgaggaaa 2250  
 aggccttgca gcggtagaag aggttgagtc aaggccgggc gcggtggctc 2300  
 acgcctgtaa tcccagcact ttgggaggcc gaggcgggtg gatcacgaga 2350  
 tcaggagatc gagaccaccc tggctaacac ggtgaaaccc cgtctctact 2400  
 aaaaaaatac aaaaagttag ccgggcgtgg tgggtgggtg ctgtagtccc 2450  
 agctactcgg gaggtgagg caggagaatg gtgcgaaccc gggaggcgga 2500  
 gcttgcagtg agcccagatg gcgcactgc actccagcct gagtacaga 2550  
 gcgagactct gtctcca 2567

<210> 241

<211> 423

<212> PRT

<213> Homo sapiens

<400> 241

Met	Ala	Gln	Ala	Val	Trp	Ser	Arg	Leu	Gly	Arg	Ile	Leu	Trp	Leu	1	5	10	15
Ala	Cys	Leu	Leu	Pro	Trp	Ala	Pro	Ala	Gly	Val	Ala	Ala	Gly	Leu	20	25	30	
Tyr	Glu	Leu	Asn	Leu	Thr	Thr	Asp	Ser	Pro	Ala	Thr	Thr	Gly	Ala	35	40	45	
Val	Val	Thr	Ile	Ser	Ala	Ser	Leu	Val	Ala	Lys	Asp	Asn	Gly	Ser	50	55	60	
Leu	Ala	Leu	Pro	Ala	Asp	Ala	His	Leu	Tyr	Arg	Phe	His	Trp	Ile	65	70	75	
His	Thr	Pro	Leu	Val	Leu	Thr	Gly	Lys	Met	Glu	Lys	Gly	Leu	Ser	80	85	90	
Ser	Thr	Ile	Arg	Val	Val	Gly	His	Val	Pro	Gly	Glu	Phe	Pro	Val	95	100	105	
Ser	Val	Trp	Val	Thr	Ala	Ala	Asp	Cys	Trp	Met	Cys	Gln	Pro	Val	110	115	120	
Ala	Arg	Gly	Phe	Val	Val	Leu	Pro	Ile	Thr	Glu	Phe	Leu	Val	Gly	125	130	135	
Asp	Leu	Val	Val	Thr	Gln	Asn	Thr	Ser	Leu	Pro	Trp	Pro	Ser	Ser	140	145	150	
Tyr	Leu	Thr	Lys	Thr	Val	Leu	Lys	Val	Ser	Phe	Leu	Leu	His	Asp	155	160	165	
Pro	Ser	Asn	Phe	Leu	Lys	Thr	Ala	Leu	Phe	Leu	Tyr	Ser	Trp	Asp	170	175	180	
Phe	Gly	Asp	Gly	Thr	Gln	Met	Val	Thr	Glu	Asp	Ser	Val	Val	Tyr	185	190	195	

Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val
				200					205					210
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val
				215					220					225
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu
				230					235					240
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr
				245					250					255
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro
				260					265					270
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu
				275					280					285
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn
				290					295					300
Leu	Thr	His	Thr	Phe	Arg	Asp	Pro	Gly	Asp	Tyr	Cys	Phe	Ser	Ile
				305					310					315
Arg	Ala	Glu	Asn	Ile	Ile	Ser	Lys	Thr	His	Gln	Tyr	His	Lys	Ile
				320					325					330
Gln	Val	Trp	Pro	Ser	Arg	Ile	Gln	Pro	Ala	Val	Phe	Ala	Phe	Pro
				335					340					345
Cys	Ala	Thr	Leu	Ile	Thr	Val	Met	Leu	Ala	Phe	Ile	Met	Tyr	Met
				350					355					360
Thr	Leu	Arg	Asn	Ala	Thr	Gln	Gln	Lys	Asp	Met	Val	Glu	Asn	Pro
				365					370					375
Glu	Pro	Pro	Ser	Gly	Val	Arg	Cys	Cys	Cys	Gln	Met	Cys	Cys	Gly
				380					385					390
Pro	Phe	Leu	Leu	Glu	Thr	Pro	Ser	Glu	Tyr	Leu	Glu	Ile	Val	Arg
				395					400					405
Glu	Asn	His	Gly	Leu	Leu	Pro	Pro	Leu	Tyr	Lys	Ser	Val	Lys	Thr
				410					415					420

Tyr Thr Val

<210> 242  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 242  
 catttcctta cctggaccc agctcc 26  
  
 <210> 243  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 243  
gaaaggccca cagcacatct ggcag 25

<210> 244  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 244  
ccaagaccgc agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245  
<211> 485  
<212> DNA  
<213> Homo sapiens

<400> 245  
gctcaagacc cagcagtggg acagccagac agacggcacg atggcactga 50  
gctcccagat ctgggcccgt tgcctcctgc tcctcctcct cctcgccagc 100  
ctgaccagtg gctctgtttt ccacacaacag acgggacaac ttgcagagct 150  
gcaaccccgag gacagagctg gagccagggc cagctggatg cccatgttcc 200  
agaggcgaag gaggcgagac acccaacttcc ccatctgcat tttctgctgc 250  
ggctgctgtc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300  
acctgccctg cccccgtccc ctcccttctt tatttatctc tgctgcccga 350  
gaacataggt cttggaataa aatggctggt tcttttgttt tccaaaaaaa 400  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246  
<211> 84  
<212> PRT  
<213> Homo sapiens

<400> 246  
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu  
1 5 10 15  
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln  
20 25 30  
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala  
35 40 45  
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Arg Asp  
50 55 60  
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg  
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr  
80

<210> 247  
<211> 2359  
<212> DNA  
<213> Homo sapiens

<400> 247  
ctgtcaggaa ggaccatctg aaggctgcaa tttgttctta gggaggcagg 50  
tgctggcctg gcttgatct tccaccatgt tcctgttgcg gccttttgat 100  
agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttcacct 150  
ccttctcggt ttcacatag tgccagccat ttttgagtc tcctttggta 200  
tccgcaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250  
ttgagaatgg agcggaggagc caaggagaag aaccaccagc ttacaagcc 300  
ctacaccaac ggaatcattg caaaggatcc cacttcacta gaagaagaga 350  
tcaaagagat tcgtcgaagt ggtagtagta aggctctgga caaactcca 400  
gagttcgagc tctctgacat tttctacttt tgcgggaaag gaatggagac 450  
cattatggat gatgaggatg caaagagatt ctgagcagaa gaactggagt 500  
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cggctcacgg tcctgtgggg gttaggagtg ctgattcggt actgctttct 600  
gctgcccgtc aggatagcac tggctttcac agggattagc cttctggtgg 650  
tgggcacaac tgtgtgggga tacttgccaa atgggaggtt taaggaaattc 700  
atgagtaaac atgttcactt aatgtgttac cggatctgcg tgcgagcgct 750  
gacagccatc atcacctacc atgacaggga aaacagacca agaaatgggtg 800  
gcactctgtg ggccaatcat acctcaccga tcgatgtgat catcttggtcc 850  
agcgatggct attatgccat ggtgggtcaa gtgcacgggg gactcatggg 900  
tgtgattcag agagccatgg tgaaggcctg cccacacgtc tggtttgagc 950  
gctcggaagt gaaggatcgc cactcggtgg ctaagagact gactgaacat 1000  
gtgcaagata aaagcaagct gcctatcctc atcttcccag aaggaaacctg 1050  
catcaataat acatcggtga tgatgttcaa aaagggaagt tttgaaattg 1100  
gagccacagt ttacctgtt gctatcaagt atgacctca atttgcgat 1150  
gccttctgga acagcagcaa atacgggatg gtgacgtacc tgctgcgaat 1200  
gatgaccagc tgggccattg tctgcagcgt gtggtacctg cctcccata 1250  
ctagagaggg agatgaagat gctgtccagt ttgcgaatag ggtgaaattc 1300  
gccattgcca ggagggagg acttggtggc ctgctgtggg atggggggcct 1350

gaagagggag aaggtgaag acacgttcaa ggaggagcag cagaagctgt 1400  
acagcaagat gatcgtgggg aaccacaagg acaggagccg ctccctgagcc 1450  
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tggagtggtcc gccgccgccc ccaactgctgt gtcctttcca gactccaggg 1550  
ctccccgggc tgctctggat ccaggaactc cggctttcgc cgagccgcag 1600  
cgggatccct gtgcaccgcg cgcagcctac ccttggtggt ctaaagcggat 1650  
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cggccaccgc ctctccagga aaggcacagc tgaggcactg tggctggcct 1900  
cggcctcaac atgcgcccca gccttgagagc tctgcagaca tgataggag 1950  
gaaactgtca tctgcagggg ctttcagcaa aatgaagggt tagattttta 2000  
tgctgtgct gatggggtta ctaaaggag ggaagaggc cagggtggcc 2050  
gctgactggg ccatggggag aacgtgtgtt cgtactccag gctaaccctg 2100  
aactccccat gtgatgcgcg cttgttgaa tgtgtgtctc gggttcccc 2150  
tctgtaatat gagtcggggg gaatggtggt gattcctacc tcacagggct 2200  
gttggtggga ttaaagtgtc gcgggtgagt gaaggacaca tcacgttcag 2250  
tggttcaagt acaggccac aaaaaggggc acggcaggcc tgagctcaga 2300  
gctgctgcac tgggctttg attgttctt gtgagtaaat aaaactggct 2350  
ggtgaatga 2359

<210> 248  
<211> 456  
<212> PRT  
<213> Homo sapiens

<400> 248  
Met Phe Leu Leu Pro Phe Asp Ser Leu Ile Val Asn Leu Leu  
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Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile  
20 25 30  
Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu  
35 40 45  
Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg  
50 55 60  
Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro  
65 70 75



Tyr	Thr	Asn	Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu	
				80					85					90	
Glu	Ile	Lys	Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp	
				95					100					105	
Asn	Thr	Pro	Glu	Phe	Glu	Leu	Ser	Asp	Ile	Phe	Tyr	Phe	Cys	Arg	
				110					115					120	
Lys	Gly	Met	Glu	Thr	Ile	Met	Asp	Asp	Glu	Val	Thr	Lys	Arg	Phe	
				125					130					135	
Ser	Ala	Glu	Glu	Leu	Glu	Ser	Trp	Asn	Leu	Leu	Ser	Arg	Thr	Asn	
				140					145					150	
Tyr	Asn	Phe	Gln	Tyr	Ile	Ser	Leu	Arg	Leu	Thr	Val	Leu	Trp	Gly	
				155					160					165	
Leu	Gly	Val	Leu	Ile	Arg	Tyr	Cys	Phe	Leu	Leu	Pro	Leu	Arg	Ile	
				170					175					180	
Ala	Leu	Ala	Phe	Thr	Gly	Ile	Ser	Leu	Leu	Val	Val	Gly	Thr	Thr	
				185					190					195	
Val	Val	Gly	Tyr	Leu	Pro	Asn	Gly	Arg	Phe	Lys	Glu	Phe	Met	Ser	
				200					205					210	
Lys	His	Val	His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu	
				215					220					225	
Thr	Ala	Ile	Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn	
				230					235					240	
Gly	Gly	Ile	Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile	
				245					250					255	
Ile	Leu	Ala	Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His	
				260					265					270	
Gly	Gly	Leu	Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys	
				275					280					285	
Pro	His	Val	Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu	
				290					295					300	
Val	Ala	Lys	Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu	
				305					310					315	
Pro	Ile	Leu	Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser	
				320					325					330	
Val	Met	Met	Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val	
				335					340					345	
Tyr	Pro	Val	Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe	
				350					355					360	
Trp	Asn	Ser	Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met	
				365					370					375	
Met	Thr	Ser	Trp	Ala	Ile	Val	Cys	Ser	Val	Trp	Tyr	Leu	Pro	Pro	
				380					385					390	

Met Thr Arg Glu Ala Asp Glu Asp Ala Val Gln Phe Ala Asn Arg  
 395 400 405

Val Lys Ser Ala Ile Ala Arg Gln Gly Gly Leu Val Asp Leu Leu  
 410 415 420

Trp Asp Gly Gly Leu Lys Arg Glu Lys Val Lys Asp Thr Phe Lys  
 425 430 435

Glu Glu Gln Gln Lys Leu Tyr Ser Lys Met Ile Val Gly Asn His  
 440 445 450

Lys Asp Arg Ser Arg Ser  
 455

<210> 249  
 <211> 1103  
 <212> DNA  
 <213> Homo sapiens

<400> 249  
 gccctctgaa accaggagctc cagcacctctt ggtcccgccc tcaccoggac 50  
 ccctggccct cacgtctcct ccagggatgg cgctggcgcc tttgatgac 100  
 gcctcgccga gcctcgccct ccacacctgg caggcccagg ctgttccac 150  
 catcctgcc ctgggcctgg ctccagacac ctttgacgat acctatgtgg 200  
 gttgtgcaga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250  
 atggcccacc atgccctgct gcgggaatcc tgggaggcag ccagaggac 300  
 ctggaggagc aagcgtcgag ggcttacctt gccccctggc ttaaagccc 350  
 agaatggaat agccattatg gtctacacca actcatogaa cacctgttac 400  
 tgggagttga atcaggccgt gcggacgggc ggaggctccc ggagactcta 450  
 catgaggcacc ttcccttca aggccttgca ttctacctg atccgggccc 500  
 tgcagctgct gcgaggcagt gggggctgca gcaggggacc tggggaggtg 550  
 gtgttccgag gtgtgggcag ccttcgcttt gaaccaaga ggctggggga 600  
 ctctgtccgc ttgggccagt ttgcctccag ctccctggat aaggcagtgg 650  
 ccacagatt tggggagaag aggcggggct gtgtgtctgc gccaggggtg 700  
 cagctagggt cacaatctga gggggcctcc tctctgccc cctggaagac 750  
 tctgtcttgg gccctggag agttccagct ctacggggtt gggccctgaa 800  
 agtccaacat ctgccaatta ggagccctgg gaaagggtga cttcatatg 850  
 acgaagaggc acctccagca gccttgagaa gcaagaacat ggttccggac 900  
 ccagccctag cagccttctc cccaaccagg atgttggcct ggggaggcca 950  
 cagcagggct gagggaaact tgctatgtga tggggacttc ctgggacaag 1000  
 caaggaagt actgaggcag ccacttgatt gaacggtgtt gcaatgtgga 1050

gacatggagt tttattgagg tagctacgtg attaaatggt attgcagtgt 1100  
gga 1103

<210> 250  
<211> 240  
<212> PRT  
<213> Homo sapiens

<400> 250  
Met Ala Leu Ala Ala Leu Met Ile Ala Leu Gly Ser Leu Gly Leu  
1 5 10 15  
His Thr Trp Gln Ala Gln Ala Val Pro Thr Ile Leu Pro Leu Gly  
20 25 30  
Leu Ala Pro Asp Thr Phe Asp Asp Thr Tyr Val Gly Cys Ala Glu  
35 40 45  
Glu Met Glu Glu Lys Ala Ala Pro Leu Leu Lys Glu Glu Met Ala  
50 55 60  
His His Ala Leu Leu Arg Glu Ser Trp Glu Ala Ala Gln Glu Thr  
65 70 75  
Trp Glu Asp Lys Arg Arg Gly Leu Thr Leu Pro Pro Gly Phe Lys  
80 85 90  
Ala Gln Asn Gly Ile Ala Ile Met Val Tyr Thr Asn Ser Ser Asn  
95 100 105  
Thr Leu Tyr Trp Glu Leu Asn Gln Ala Val Arg Thr Gly Gly Gly  
110 115 120  
Ser Arg Glu Leu Tyr Met Arg His Phe Pro Phe Lys Ala Leu His  
125 130 135  
Phe Tyr Leu Ile Arg Ala Leu Gln Leu Leu Arg Gly Ser Gly Gly  
140 145 150  
Cys Ser Arg Gly Pro Gly Glu Val Val Phe Arg Gly Val Gly Ser  
155 160 165  
Leu Arg Phe Glu Pro Lys Arg Leu Gly Asp Ser Val Arg Leu Gly  
170 175 180  
Gln Phe Ala Ser Ser Ser Leu Asp Lys Ala Val Ala His Arg Phe  
185 190 195  
Gly Glu Lys Arg Arg Gly Cys Val Ser Ala Pro Gly Val Gln Leu  
200 205 210  
Gly Ser Gln Ser Glu Gly Ala Ser Ser Leu Pro Pro Trp Lys Thr  
215 220 225  
Leu Leu Leu Ala Pro Gly Glu Phe Gln Leu Ser Gly Val Gly Pro  
230 235 240

<210> 251  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 251

ccaccacctg gaggtcctgc agttgggcag gaactccatc cggcagattg 50

<210> 252

<211> 1076

<212> DNA

<213> Homo sapiens

<400> 252

gtggcttcat ttcagtggct gacttccaga gagcaatatg gctggttccc 50

caacatgcct caccctcatc tatatccttt ggcagctcac agggtcagca 100

gcctctggac cctgaaaga gctggctcgt tccgttggtg gggccgtgac 150

tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200

tcaacacaac ccctcttgtc accatacagc cagaaggggg cactatcata 250

gtgacccaaa atcgtaatat ggagagagta gacttcccag atggaggcta 300

ctccctgaag ctacgcaaac tgaagaagaa tgactcaggg atctactatg 350

tggggatata cagctcatca ctccagcagc cctccaccca ggagtacgtg 400

ctgcatgtct acgagcacct gtcaaagcct aaagtcaaca tgggtctgca 450

gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattggaac 500

atggggaaga ggatgtgatt tatacctgga aggccctggg gcaagcagcc 550

aatgagtccc ataatgggtc catcctcccc atctcctgga gatggggaga 600

aagtgatatg accttcatct gcgttgccag gaaccctgtc agcagaaaact 650

tctcaagccc catccttgcc aggaagctct gtgaagggtc tgctgatgac 700

ccagattcct ccattggtcct cctgtgtctc ctgttggtgc ccctcctgct 750

cagtctcttt gtactggggc tatttctttg gtttctgaag agagagagac 800

aagaagagta cattgaagag aagaagagag tggacatttg tggggaaact 850

ccataacatat gccccattc tggagagaac acagagtacg acacaatccc 900

tcacactaat agaacaatcc taaaggaaga tccagcaaat acggtttact 950

ccactgtgga aataccgaaa aagatggaaa atccccactc actgtctacg 1000

atgccagaca caccaaggct atttgcttat gagaatgtta tctagacagc 1050

agtgcactcc cctaagtctc tgctca 1076

<210> 253

<211> 335

<212> PRT

<213> Homo sapiens

<400> 253

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Gly	Ser	Val	Gly	Gly	35	Ala	Val	Thr	Phe	Pro	40	Leu	Lys	Ser	Lys	Val	45										
Lys	Gln	Val	Asp	Ser	50	Ile	Val	Trp	Thr	Phe	55	Asn	Thr	Thr	Pro	Leu	60										
Val	Thr	Ile	Gln	Pro	65	Glu	Gly	Gly	Thr	Ile	70	Ile	Val	Thr	Gln	Asn	75										
Arg	Asn	Arg	Glu	Arg	80	Val	Asp	Phe	Pro	Asp	85	Gly	Gly	Tyr	Ser	Leu	90										
Lys	Leu	Ser	Lys	Leu	95	Lys	Lys	Asn	Asp	Ser	100	Gly	Ile	Tyr	Tyr	Val	105										
Gly	Ile	Tyr	Ser	Ser	110	Ser	Ser	Leu	Gln	Gln	115	Pro	Ser	Thr	Gln	Glu	Tyr	120									
Val	Leu	His	Val	Tyr	125	Glu	His	Leu	Ser	Lys	130	Pro	Lys	Val	Thr	Met	135										
Gly	Leu	Gln	Ser	Asn	140	Lys	Asn	Gly	Thr	Cys	145	Val	Thr	Asn	Leu	Thr	150										
Cys	Cys	Met	Glu	His	155	Gly	Glu	Glu	Asp	Val	160	Ile	Tyr	Thr	Trp	Lys	165										
Ala	Leu	Gly	Gln	Ala	170	Ala	Asn	Glu	Ser	His	175	Asn	Gly	Ser	Ile	Leu	180										
Pro	Ile	Ser	Trp	Arg	185	Trp	Gly	Glu	Ser	Asp	190	Met	Thr	Phe	Ile	Cys	195										
Val	Ala	Arg	Asn	Pro	200	Val	Ser	Arg	Asn	Phe	205	Ser	Ser	Pro	Ile	Leu	210										
Ala	Arg	Lys	Leu	Cys	215	Glu	Gly	Ala	Ala	Asp	220	Asp	Pro	Asp	Ser	Ser	225										
Met	Val	Leu	Leu	Cys	230	Leu	Leu	Leu	Val	Pro	235	Leu	Leu	Leu	Ser	Leu	240										
Phe	Val	Leu	Gly	Leu	245	Phe	Leu	Trp	Phe	Leu	250	Lys	Arg	Glu	Arg	Gln	255										
Glu	Glu	Tyr	Ile	Glu	260	Glu	Lys	Lys	Arg	Val	265	Asp	Ile	Cys	Arg	Glu	270										
Thr	Pro	Asn	Ile	Cys	275	Pro	His	Ser	Gly	Glu	280	Asn	Thr	Glu	Tyr	Asp	285										
Thr	Ile	Pro	His	Thr	290	Asn	Arg	Thr	Ile	Leu	295	Lys	Glu	Asp	Pro	Ala	300										
Asn	Thr	Val	Tyr	Ser	305	Thr	Val	Glu	Ile	Pro	310	Lys	Lys	Met	Glu	Asn	315										
Pro	His	Ser	Leu	Leu		Thr	Met	Pro	Asp	Thr		Pro	Arg	Leu	Phe	Ala											

Tyr Glu Asn Val Ile  
335

<210> 254  
<211> 1053  
<212> DNA  
<213> Homo sapiens

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ggccgtgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150  
tctggacott caacacaacc cctcttgta ccatagagcc agaagggggc 200  
actatcatag tgaccacaaa tcgtaataag gagagagtag acttcccaga 250  
tggagggtac tccctgaagc tcagcaaact gaagaagaat gactcaggga 300  
tctactatgt ggggatatac agctcatcac tccagcagcc ctccaccag 350  
gagtacgtgc tgcatgtcta cgagcacctg tcaaaagccta aagtcacat 400  
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450  
gcatggaaca tggggaagag gatgtgattt atacctgaa ggcctgggg 500  
caagcagcca atgagtcoca taatgggtcc atcctcccca tctctggag 550  
atgggggaga agtgatatga ccttcatctg cgttgccagg aacctgtca 600  
gcagaaaact ctcaagcccc atccttgcca ggaagctctg tgaagtgct 650  
gctgatgacc cagattcctc catggtcctc ctgtgtctcc tgttggtgcc 700  
cctctgtctc agtctctttg tactggggct atttcttttg tttctgaaga 750  
gagagagaca agaagagtag attgaagaga agaagagagt ggacatttgt 800  
cgggaaactc ctaacatatg ccccatctt ggagagaaca cagagtacga 850  
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaaata 900  
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950  
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ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050  
aaa 1053

<210> 255  
<211> 860  
<212> DNA  
<213> Homo sapiens

<400> 255  
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aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150  
gaatggcata ctattatcct ggccctctgac aaaagagaaa agatagaaga 200  
acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250  
ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300  
tctatgggtg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350  
tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400  
ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450  
gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500  
tgcacaaacta tgtgaggagc atggaatcct tagagaaaa atcattgacc 550  
tatccaatgc caatgctgctg ctccaggccc gagaatgaag aatggcctga 600  
gcctccagtg ttgagtggtg acttctcacc aggaactccac catcatccct 650  
tcctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700  
ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750  
acctcatcaa gaatcaaaga cttctttaaa tttctctttg atacaccctt 800  
gacaattttt catgaaatta ttctctcttc tgttcaataa atgattaccc 850  
ttgcacttaa 860

<210> 256  
<211> 180  
<212> PRT  
<213> Homo sapiens

<400> 256  
Met Lys Met Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys  
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Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val  
20 25 30  
Glu Lys Ile Asn Gly Glu Trp His Thr Ile Leu Ala Ser Asp  
35 40 45  
Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu  
50 55 60  
Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val His  
65 70 75  
Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp  
80 85 90  
Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe  
95 100 105  
Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met  
110 115 120

Ala His Leu Ile Asn Glu Lys Asp Gly Glu Thr Phe Gln Leu Met  
 125 130  
 Gly Leu Tyr Gly Arg Glu Pro Asp Leu Ser Ser Asp Ile Lys Glu  
 140 145 150  
 Arg Phe Ala Gln Leu Cys Glu Glu His Gly Ile Leu Arg Glu Asn  
 155 160 165  
 Ile Ile Asp Leu Ser Asn Ala Asn Arg Cys Leu Gln Ala Arg Glu  
 170 175 180

<210> 257  
 <211> 766  
 <212> DNA  
 <213> Homo sapiens

<400> 257  
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 gacatctcgc aatggattca gcctgctggt tctactgctg ttaggagtag 100  
 ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaatgt 150  
 tctcaaaacc ccattctctt ctttgagtgg tggttccagg gaattatagg 200  
 agcagggtctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250  
 aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatttttc 300  
 agtgatgatca cagtcattgg tgctctgtat tgcattgctga tatccatcca 350  
 ggctctctta aaaggctctc tcatgtgtaa ttctccaagc aacagtaatg 400  
 ccaattgtga attttcattg aaaaacatca gtgacattca tcagaatcc 450  
 ttcaacttgc agtgggtttt caatgactct tgtgcacctc ctactgggtt 500  
 caataaaacc accagtaacg acaccatggc gagggtgctg agagcatcta 550  
 gtttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600  
 gtatttttag gtctattgct tggttgaatt ctggaggctc tgtttgaggct 650  
 cagtcagata gtcacgggtt tccttggtg tctgtgtgga gtctctaagc 700  
 gaagaagtca aattgtgtag tttaattgga ataaaatgta agtatcagta 750  
 gtttgaaaaa aaaaaa 766

<210> 258  
 <211> 229  
 <212> PRT  
 <213> Homo sapiens

<400> 258  
 Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu  
 1 5 10 15  
 Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu  
 20 25 30  
 Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile





tcaacacggtt gctttaataa atcacttgcc ctgc 434

<210> 260  
<211> 83  
<212> PRT  
<213> Homo sapiens

<400> 260  
Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys  
1 5 10 15  
Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu  
20 25 30  
Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln  
35 40 45  
Val Ala Lys Leu Asn Pro Pro Pro Glu Ala Leu Ala Ala Lys Leu  
50 55 60  
Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu  
65 70 75  
Ser Leu Lys Lys Ser Trp Trp Lys  
80

<210> 261  
<211> 636  
<212> DNA  
<213> Homo sapiens

<400> 261  
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ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150  
cgccccagtg cctctcccc tgcagccctg ccctcgaac tgtgacatgg 200  
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gccaatgacc catttgccaa taaagaagat cccttctact atgactggaa 300  
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ggatcgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400  
cagcacagtc ctgtacctga gaaggccatc ccaactcatc ctccaggctc 450  
tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500  
taaacatggc ccccgacc cctctccctg ggaggcotta tctcaagga 550  
aggacttctc tccaagggca ggctgttagg cccctttctg atcaggaggc 600  
ttctttatga attaaactcg cccaccacc cctca 636

<210> 262  
<211> 89  
<212> PRT  
<213> Homo sapiens

<400> 262

Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr  
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Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe  
20 25 30

Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly  
35 40 45

Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys  
50 55 60

Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu  
65 70 75

Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys  
80 85

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

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actcctctgt ctggttgtgg gctcctggct actgcgccg atcctggctt 150  
ggacctatgc cttctataac aactgccgcc ggctccagt tttccacag 200  
ccccaaaac ggaactggtt ttggggtoac ctgggcctga tcaactctac 250  
agaggagggc ttgaaggact cgaccagat gtcggccacc tattccacag 300  
gctttacggt atggctgggt cccatcatcc ccttcacgt tttatgccac 350  
cctgacacca tcggtctat caccaatgcc tcagctgcca ttgacccaa 400  
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tgctgagtgg cgggtgacaag tggagccgcc accgtcggat gctgacgccc 500  
gccttcacat tcaacatcct gaagtcctat ataacgatct tcaacaagag 550  
tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600  
gtcgtctgga catgtttgag cacatcagcc tcatgacctt ggacagtcta 650  
cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggccacagta 700  
atatattgcc accatcttgg agctcagtc ccttgtagag aaaagaagcc 750  
agcatatcct ccagcacatg gactttctgt attacctct ccatgacggg 800  
cggcgcttcc acagggcctg ccgcctgggt catgacttca cagacgctgt 850  
catccggagg cggcgctgca cctcccccac tcagggtatt gatgattttt 900  
tcaaagacaa agccaagtcc aagacttttg atttcattga tgtgcttctg 950



Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met
				140					145					150
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr
				155					160					165
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His
				170					175					180
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile
				185					190					195
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe
				200					205					210
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile
				215					220					225
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu
				230					235					240
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg
				245					250					255
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val
				260					265					270
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp
				275					280					285
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp
				290					295					300
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp
				305					310					315
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His
				320					325					330
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala
				335					340					345
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu
				350					355					360
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu
				365					370					375
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg
				380					385					390
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp
				395					400					405
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys
				410					415					420
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro
				425					430					435
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser
				440					445					450

Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro  
 455 460 465  
 Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val  
 470 475 480  
 Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His  
 485 490 495  
 Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly  
 500 505 510  
 Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln  
 515 520

<210> 265  
 <211> 584  
 <212> DNA  
 <213> Homo sapiens

<400> 265  
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 ctggcctcct gctgtttgct ttccacagga ttcttaaact ctctcttctc 100  
 tcttctctct ctgtactcca gggaaatata ctttcaactc tcagocactc 150  
 atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200  
 cagatatgtc cagagatgct ggggtgcagaa agaggggata ttctcaggaa 250  
 agcagactca agtaccaaca tttttaaccc aagaggaaaat ttgagaaaagt 300  
 ttcaggattt ctctggacaa gatcctaaca ttttactgag tcatcttttg 350  
 gccagaatct ggaaccata caagaaacgt gagactcctg attgctttctg 400  
 gaaataactgt gtctgaagtg aaataagcat ctgttagtca gtcagaaac 450  
 acccatotta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500  
 tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaaaata 550  
 aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266  
 <211> 124  
 <212> PRT  
 <213> Homo sapiens

<400> 266  
 Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu  
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 Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser  
 20 25 30  
 Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu  
 35 40 45  
 Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu  
 50 55 60

Gly Ala Glu Arg Gly Asp Ile Leu Arg Lys Ala Asp Ser Ser Thr  
65 70  
Asn Ile Phe Asn Pro Arg Gly Asn Leu Arg Lys Phe Gln Asp Phe  
80 85 90  
Ser Gly Gln Asp Pro Asn Ile Leu Leu Ser His Leu Leu Ala Arg  
95 100 105  
Ile Trp Lys Pro Tyr Lys Lys Arg Glu Thr Pro Asp Cys Phe Trp  
110 115 120  
Lys Tyr Cys Val

<210> 267  
<211> 654  
<212> DNA  
<213> Homo sapiens

<400> 267  
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taagagacct acagccacca ggcaccacct ccgccaggaa ctgcaggccc 150  
acctgtctgc aaccacagctg aggccatgcc ctccccaggg accgtctgca 200  
gcctctctgt cctcgcatg ctctggctgg acttgccat gccaggctcc 250  
agcttctctga gccctgaaca ccagagagtc cagcagagaa aggagtcgaa 300  
gaagccacca gccaaagctgc agccccgagc tctagcaggc tggctccgcc 350  
cggaagatgg aggtcaagca gaagggggcag aggatgaact ggaagtccgg 400  
ttcaacgcccc cttttgatgt tggaatcaag ctgtcagggg ttcagtacca 450  
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tgta 654

<210> 268  
<211> 117  
<212> PRT  
<213> Homo sapiens

<400> 268  
Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Gly Met  
1 5 10 15  
Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro  
20 25 30  
Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro  
35 40 45

Ala Lys Leu Gln Pro Arg Ala Leu Ala Gly Trp Leu Arg Pro Glu  
50 55 60

Asp Gly Gly Gln Ala Glu Gly Ala Glu Asp Glu Leu Glu Val Arg  
65 70 75

Phe Asn Ala Pro Phe Asp Val Gly Ile Lys Leu Ser Gly Val Gln  
80 85 90

Tyr Gln Gln His Ser Gln Ala Leu Gly Lys Phe Leu Gln Asp Ile  
95 100 105

Leu Trp Glu Glu Ala Lys Glu Ala Pro Ala Asp Lys  
110 115

<210> 269  
<211> 1332  
<212> DNA  
<213> Homo sapiens

<400> 269  
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agaatatgaa cacgtggctg ctgttctctc cctgttccc ggtgcagggtg 150  
cagaccctga tagtctgat catcggtgatg ctctgtctcc tctgtggaatt 200  
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gctgtctatc ttacacctct acttgagtat gtccctaacc ctgagccccc 350  
cacgcctggg gccagagtct ttgtcccccg tgtgogcatg tgttcagggt 400  
cagcctctcc cagaagttag atcatggaca aaaagggcaa atcacaggaa 450  
gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500  
gcgagagact gcaggagtgg tgccagggtc ttgaagtaac aagtttataaa 550  
tgttcagaga caatggaatg gaatttata ggcaagaaca ggacattatg 600  
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tgggccagct gcaaagcgtc ttccattctc tgggcagtggt tggccccag 900  
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aggccagccc ccaagaatgc cctgtctctg acagcttggt caacctctg 1000  
tcagggcaga gggagtggg tgggtcaggc tctgggtctc cctccatctc.1050



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 acacacccca ccaagagcct ccttgttcat aaccacaggt tacctctaca 1150  
 accactgtcc ccacacaacc ctggggatgt tttaaaacac acacctctaa 1200  
 cgcatatctt acagtcactg ttgtcttccc tgagggttga atttttttta 1250  
 atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270

<211> 142

<212> PRT

<213> Homo sapiens

<400> 270

Met	Asn	Thr	Trp	Leu	Leu	Phe	Leu	Pro	Leu	Phe	Pro	Val	Gln	Val
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Gln	Thr	Leu	Ile	Val	Val	Ile	Ile	Gly	Met	Leu	Val	Leu	Leu	Leu
			20					25					30	
Asp	Phe	Leu	Gly	Leu	Val	His	Leu	Gly	Gln	Leu	Leu	Ile	Phe	His
			35					40					45	
Ile	Tyr	Leu	Ser	Met	Ser	Pro	Thr	Leu	Ser	Pro	Arg	Ser	Pro	Gln
			50					55					60	
Gly	Trp	Val	Val	Arg	Ala	Ala	His	Leu	Thr	Pro	Leu	Leu	Glu	Tyr
			65					70					75	
Val	Pro	Asn	Pro	Glu	Pro	Pro	Thr	Pro	Gly	Ala	Arg	Val	Phe	Val
			80					85					90	
Pro	Arg	Val	Arg	Met	Cys	Ser	Gly	Ser	Ala	Ser	Pro	Arg	Ser	Glu
			95					100					105	
Ile	Met	Asp	Lys	Lys	Gly	Lys	Ser	Gln	Glu	Glu	Ile	Lys	Ser	Met
			110					115					120	
Arg	Thr	Gln	Gln	Ala	Gln	Gln	Glu	Ala	Glu	Leu	Thr	Pro	Arg	Pro
			125					130					135	
Ala	Gly	Val	Val	Pro	Gly	Ala								
				140										

<210> 271

<211> 1484

<212> DNA

<213> Homo sapiens

<400> 271

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 tgctcagcaa ctactggttt gtgggcacac agaagtgccc caagccctg 200  
 tgcgagaaag gtctggcagc caagtgcctt gacatgccag tgtccctgga 250





accaaccagg gtagtggcat ggagcaccgt aaccatctgt gcttctgtga 250  
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 caacaggctg gcgccaatgg cattacagag aaagcaatct gtgtggctag 450  
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 tcagacctgg aattctgatt ccaaactctt tattactttg ggaagtcact 1000  
 cagcctcccc gtagccatct ccagggtgac ggaaccagt gtattacctg 1050  
 ctggaaaccaa ggaaactaac aatgtaggtt actagtgaat accccaatgg 1100  
 tttctccaat tatgcccatg ccacaaaaac aataaaacaa aattctctaa 1150  
 cactgaaa 1158

<210> 274  
 <211> 86  
 <212> FRT  
 <213> Homo sapiens

<400> 274  
 Met Trp Leu Pro Leu Gly Leu Leu Ser Leu Cys Leu Ser Pro Leu  
 1 5 10 15  
 Pro Ile Leu Ser Ser Pro Ser Leu Lys Ser Gln Ala Cys Gln Gln  
 20 25 30  
 Leu Leu Trp Thr Leu Pro Ser Pro Leu Val Ala Phe Arg Ala Asn  
 35 40 45  
 Arg Thr Thr Tyr Val Met Asp Val Ser Thr Asn Gln Gly Ser Gly  
 50 55 60  
 Met Glu His Arg Asn His Leu Cys Phe Cys Asp Leu Tyr Asp Arg  
 65 70 75  
 Ala Thr Ser Pro Pro Leu Lys Cys Ser Leu Leu  
 80 85

<210> 275  
 <211> 2694  
 <212> DNA  
 <213> Homo sapiens

<400> 275  
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 attagtttgt ctttgtagg agcaatcgga ctgatgtttt tgatgcttg 150  
 atgtgccctt ccaatataca acaataactg gccctctttt gttctatttt 200  
 tttacatcct ttcacctatt ccatactgca tagcaagaag attagtggat 250  
 gatacagatg ctatgagtaa cgcttgtaag gaacttgcca tctttcttac 300  
 aacgggcatt gtctgtcag ctttggtact ccctattgta ttgcccagag 350  
 cacatctgat tgagtgggga gcttgtgcac ttgtctcac aggaacaca 400  
 gtcatctttg caactatact aggccttttc ttggtcttg gaagcaatga 450  
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 atggacttcc tgtcatttgt tggccattca cgcacacagg agatggggca 550  
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 cttctcactt ttattgtaag catactattt tcacagagac ttgctgaagg 650  
 attaaaagga ttttctcttt tggaaaagct tgactgattt cacacttacc 700  
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 ttctgttagg gttgattttt ttggaatca atatgcaatg ttaaacactt 800  
 ttttaagtga atcatttgca ttggttagga attcagaatt ccgccggctc 850  
 tattactggt caagtacatc ttttctctta aaattattta gcctccatta 900  
 ttacaaaaaa ttataaaaat aagttttcag tcagtcagga tgacatcact 950  
 cccaatgtta tgcagacata cagacggttg gcatacgta tagactgtat 1000  
 actcagtgca aatatagctg catttatacc tcagaggggc caagtgttaa 1050  
 tgcccattgc ctccgttaag ggttggtggt tttactggtg gacagatgtt 1100  
 ttgtggattg aaaattattt tatggaattg ctacagagga gtgctttctt 1150  
 tctcaattgt tagaagaatt tatgttaaac ttttaaggtaa ggggtgtaaa 1200  
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 tgcaatgtgg gaagaaatga cattgaaatt ccagtttttg aatccctgtt 1300  
 ctattttata gtgaaatttg tgatctccta tcaaccttcc atgttttacc 1350  
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 gtttgcatca tatatgccag aaaaccttcc tctgcttcct ccttttgact 1450



	35		40		45
Pro Ile Pro Tyr Cys Ile Ala Arg Arg Leu Val Asp Asp Thr Asp	50		55		60
Ala Met Ser Asn Ala Cys Lys Glu Leu Ala Ile Phe Leu Thr Thr	65		70		75
Gly Ile Val Val Ser Ala Phe Gly Leu Pro Ile Val Phe Ala Arg	80		85		90
Ala His Leu Ile Glu Trp Gly Ala Cys Ala Leu Val Leu Thr Gly	95		100		105
Asn Thr Val Ile Phe Ala Thr Ile Leu Gly Phe Phe Leu Val Phe	110		115		120
Gly Ser Asn Asp Asp Phe Ser Trp Gln Gln Trp	125		130		

<210> 277  
 <211> 4104  
 <212> DNA  
 <213> Homo sapiens

<400> 277  
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 cacactgcct ggtggaggga aggagcccgg gcgcctctcg ccgctccccg 150  
 cgccgcgcgt cgcaactccc caccgcccgc cgcccgcgcg ccgcccgcgc 200  
 caaagcatga gtgagccgcg tctctgcagc tgcccggggc gcgaatggca 250  
 ggctgtttcc gcggagtaaa aggtggcgcc ggtcagtggt cgtttccaat 300  
 gacggacatt aaccagactg tcagatcctg gggagtcgcg agccccgagt 350  
 ttggagtttt ttccccccac aacgtcacag tccgaactgc agaggggaaag 400  
 gaaggcggca ggaaggcgaa gctcgggctc cggcacgtag ttgggaaact 450  
 tgccgggtcct agaagtgcgc tccccgcctt gccggccgcc cttgcagccc 500  
 cgagccgagc agcaaagtga gacattgtgc gcctgccaga tccgccggcc 550  
 gcggaccggg gctgcctcgg aaacacagag gggctcttct tcgccctgca 600  
 tataattagc ctgcacacaa agggagcagc tgaatggagg ttgtcactct 650  
 ctggaaaagg atttctgacc gagcgcttcc aatggacatt ctccagtcct 700  
 tctgaaaaga ttctcgctaa tggatttctt gctgctcggt ctctgtctat 750  
 actggctgct gaggaggccc tcgggggtgg tcttgtgtct gctgggggcc 800  
 tgctttcaga tgcgtcccgc cgccccagc gggtgcccg agctgtgcgc 850  
 gtgcgagggg cggtgctgt actgcgagc gctcaacct accgagggcg 900  
 cccacaacct gtccggcctg ctgggcttgt cctgcgcta caacagcctc 950





ttggaagatc tgtccatatt caggaatctg agagtgtaaa aaagtggtgcc 2600  
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 cctgcccatg attaaacatc atgtatgtag aagatcttaa gtccatacgc 2700  
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 aacgggaatt tagctcacat catttcatgc cctgtgctct ctactgtctg 2900  
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 tattcttccc acagaggggtg ctaatctcat tatgctgtgc tatctgaaaa 3150  
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 cctccattt gcagtacctt cccagctgat taaagttcag cagtgggtatt 3250  
 gaggtttttc gaatatattat atagaaaaaa agtcttttca catgacaaat 3300  
 gacactctca caccagtctt agccctagta gtttttttag ttggaccaga 3350  
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 taccacaat gcagcctata ctccaagac tacaaagtta ccacgcgaaa 3500  
 ggaaaggtta ttccagtaaa aggaaatagt tttctcaacc atttaaaaaat 3550  
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 agttttccaa gcaagtacac acagatctct ggtaggatta ggggccactt 3750  
 gtgtttccgg ctatttttag tcgacttgtc agcaagtttg atgcctagtc 3800  
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 gtcaaaaata acataaatta tctcctctag atgagtggcg atgttggtg 4000  
 atttgggtct gccattgaca gaatgtcaaa taaaaaggaa tttagctagaa 4050  
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 gtca 4104

<210> 278  
 <211> 522  
 <212> PRT  
 <213> Homo sapiens

<400> 278

Met	Asp	Phe	Leu	Leu	Leu	Gly	Leu	Cys	Leu	Tyr	Trp	Leu	Leu	Arg
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Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe	Gln
				20					25					30
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys
				35					40					45
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala
				50					55					60
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn
				65					70					75
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln
				80					85					90
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln
				95					100					105
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu
				110					115					120
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro
				125					130					135
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln
				140					145					150
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr
				155					160					165
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile
				170					175					180
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn
				185					190					195
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys
				200					205					210
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val	Asn
				215					220					225
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys	Leu
				230					235					240
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp	Val
				245					250					255
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Tyr
				260					265					270
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser	Leu
				275					280					285



<400> 280  
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 ctgcagctct gcgcactgac ccaggcggtc tccaaactct gggtcccaaa 100  
 cacggacttc gacgtcgag ccaactggag ccagaaccgg acccctgtcg 150  
 ccggcggcgc cgttgagttc ccggcggaca agatggtgtc agtctgtgtg 200  
 caagaaggtc acgccgtctc agacatgctc ctgccgtgtg atggggaact 250  
 cgtcctgggt tcaggagccg gattcggcgt ctacagcgtg ggctcgcacc 300  
 tggactgtgg cgcgggcgaa cctgcgtctc tccgcgactc tgaccgcttc 350  
 tcttgcatg acccgcacct gtggcgtctc ggggacgagg cacctggcct 400  
 cttcttcgtg gacgccgagc gcgtgccctg ccgccacgac gacgtcttct 450  
 ttccgcctag tgccctcttc cgcgtggggc tcggcccttg cgtagcccc 500  
 gtgcgtgtcc gcagcatctc ggctctgggc cggacgttca cgcgcgacga 550  
 ggacctgggt gttttccttg cgtcccgccg gggccgccta cgctccacg 600  
 ggccgggcgc gctgagcgtg ggcgccgagg actgcgcgga ccgctcgggc 650  
 tgcgtctcgc gcaacgcgga ggcgcagccg tggatctcgc cggccctgct 700  
 ccagccct 709

<210> 281  
 <211> 229  
 <212> PRT  
 <213> Homo sapiens

<400> 281  
 Met Gly Val Leu Gly Arg Val Leu Leu Trp Leu Gln Leu Cys Ala  
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 Leu Thr Gln Ala Val Ser Lys Leu Trp Val Pro Asn Thr Asp Phe  
 20 25 30  
 Asp Val Ala Ala Asn Trp Ser Gln Asn Arg Thr Pro Cys Ala Gly  
 35 40 45  
 Gly Ala Val Glu Phe Pro Ala Asp Lys Met Val Ser Val Leu Val  
 50 55 60  
 Gln Glu Gly His Ala Val Ser Asp Met Leu Leu Pro Leu Asp Gly  
 65 70 75  
 Glu Leu Val Leu Ala Ser Gly Ala Gly Phe Gly Val Ser Asp Val  
 80 85 90  
 Gly Ser His Leu Asp Cys Gly Ala Gly Glu Pro Ala Val Phe Arg  
 95 100 105  
 Asp Ser Asp Arg Phe Ser Trp His Asp Pro His Leu Trp Arg Ser  
 110 115 120  
 Gly Asp Glu Ala Pro Gly Leu Phe Phe Val Asp Ala Glu Arg Val  
 125 130 135

Pro Cys Arg His Asp Asp Val Phe Phe Pro Pro Ser Ala Ser Phe  
140 145 150

Arg Val Gly Leu Gly Pro Gly Ala Ser Pro Val Arg Val Arg Ser  
155 160 165

Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala  
170 175 180

Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro  
185 190 195

Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly  
200 205 210

Cys Val Cys Gly Asn Ala Glu Ala Gln Pro Trp Ile Cys Ala Ala  
215 220 225

Leu Leu Gln Pro

<210> 282  
<211> 644  
<212> DNA  
<213> Homo sapiens

<400> 282  
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gaagcgaatg tttagccta ctggttgat tgcaactatc atggtgtgtg 100  
tgtgttttgc acttaccctg tgttctgcct tttgggtggc taacaaggga 150  
cttgcaacta tcttctgcat ttgcagtcct ttggcattga cgtggtacag 200  
cctttctctc ataccatttg caagggatgc tgtgaagaag tgttttgccg 250  
tgtgtcttgc ataattcatg gccagtttta tgaagctttg gaaggcacta 300  
tggacagaag ctggtggaca gttttgtaac tatcttcgaa acctctgtct 350  
tacagacatg tgccttttat ctgacagcaa tgtgttgctt gtgattcgaa 400  
catttgaggg ttacttttgg aagcaacaat acattctcga acctgaatgt 450  
cagtagcaca ggatgagaag tgggttctgt atcttgtgga gtggaatctt 500  
cctcatgtac ctgtttctc tctggatgtt gtccactga attccatga 550  
atacaaacct attcagcaac agcaaaaaaa aaaaaaaaaa aaaaaaaa 600  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa aaaa 644

<210> 283  
<211> 77  
<212> PRT  
<213> Homo sapiens

<400> 283  
Met Gly Pro Val Lys Gln Leu Lys Arg Met Phe Glu Pro Thr Arg  
1 5 10 15  
Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu

	20		25		30
Cys Ser Ala Phe Trp Trp His Asn Lys Gly Leu Ala Leu Ile Phe					
	35		40		45
Cys Ile Leu Gln Ser Leu Ala Leu Thr Trp Tyr Ser Leu Ser Phe					
	50		55		60
Ile Pro Phe Ala Arg Asp Ala Val Lys Lys Cys Phe Ala Val Cys					
	65		70		75
Leu Ala					

<210> 284  
 <211> 2623  
 <212> DNA  
 <213> Homo sapiens

<400> 284  
 ttgagcgcag gtgagctcct gcgcgttccg gggcgcttcc tccagtcacc 50  
 ctcccgcggt taccgcgcgc gcgcgcgcagg gagtctctcc cagacctcc 100  
 ctcccgttgc tccaaactaa tacggactga acggatcgct gcgaggggtg 150  
 gagagaaaat tagggggaga aaggacagag agagcaacta ccatccatag 200  
 ccagatagat tatcttacac tgaactgac aagtactttg aaaaatgactt 250  
 cgaaatttat ctgtgtgtcc ttcatacttg ctgcactgag tctttcaacc 300  
 accttttctc tccaaactaga ccagcaaaag gttctactag tttcttttga 350  
 tggattccgt tgggattact tatataaagt tccaacgccc cattttcatt 400  
 atattatgaa atatggtgtt cactggaagc aagtactata tgtttttatt 450  
 acaaaaacct accctaacca ttatactttg gtaactggcc tctttgcaga 500  
 gaatcatggg attgttgcaa atgatatgtt tgatctctatt cggaacaaat 550  
 cttctctctt ggatcacatg aatatttatg attccaagtt ttgggaagaa 600  
 ggcacaccaa tatggatcac aaaccagagg gcaggacata ctagtgtgtc 650  
 agccatgtgg ccggaacag atgtaaaaat acataagcgc tttctctactc 700  
 attacatgcc ttacaatgag tcagtttcat ttgaagatag agttgcacaa 750  
 attgttgaat ggtttacgtc aaaagagccc ataaatcttg gtctctctcta 800  
 ttgggaagac cctgatgaca tgggcccacca tttgggacct cagactccgc 850  
 tcattgggccc tgtcatttca gatattgaca agaagttagg atatctcata 900  
 caaatgtcta aaaaggcaaa gttgtggaac actctgaacc taatcatcac 950  
 aagtgatcat ggaatgacgc agtgccttga ggaaaggtta atagaacttg 1000  
 accagtaacct ggataaagac cactataccc tgattgatca atctccagta 1050  
 gcagccatct tgccaaaaga aggtaaaatt gatgaagtct atgaagcact 1100







290	295	300
Val Pro Glu Arg Trp His Tyr Lys Tyr	Asn Ser Arg Ile Gln Pro	
305	310	315
Ile Ile Ala Val Ala Asp Glu Gly Trp His Ile Leu Gln Asn Lys		
320	325	330
Ser Asp Asp Phe Leu Leu Gly Asn His Gly Tyr Asp Asn Ala Leu		
335	340	345
Ala Asp Met His Pro Ile Phe Leu Ala His Gly Pro Ala Phe Arg		
350	355	360
Lys Asn Phe Ser Lys Glu Ala Met Asn Ser Thr Asp Leu Tyr Pro		
365	370	375
Leu Leu Cys His Leu Leu Asn Ile Thr Ala Met Pro His Asn Gly		
380	385	390
Ser Phe Trp Asn Val Gln Asp Leu Leu Asn Ser Ala Met Pro Arg		
395	400	405
Val Val Pro Tyr Thr Gln Ser Thr Ile Leu Leu Pro Gly Ser Val		
410	415	420
Lys Pro Ala Glu Tyr Asp Gln Glu Gly Ser Tyr Pro Tyr Phe Ile		
425	430	435
Gly Val Ser Leu Gly Ser Ile Ile Val Ile Val Phe Phe Val Ile		
440	445	450
Phe Ile Lys His Leu Ile His Ser Gln Ile Pro Ala Leu Gln Asp		
455	460	465
Met His Ala Glu Ile Ala Gln Pro Leu Leu Gln Ala		
470	475	

<210> 286  
 <211> 1337  
 <212> DNA  
 <213> Homo sapiens

<400> 286  
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 agggagggtga agaaaccaag acgcagagag gccaaagcccc ttgccttggg 150  
 tcacacagcc aaaggaggca gagccagaac tcacaaccac atccagaggc 200  
 aacaggggaca tggccacctg ggacgaaaag gcagtcaccc gcaggggcaa 250  
 ggtgggtccc gctgagagga tgagcaagtt ctttaaggcac ttacaggtcg 300  
 tgggagacga ctaccatgcc tggaacatca actacaagaa atgggagaat 350  
 gaagaggagg aggaggagga ggagcagcca cccccacac cagtctcagg 400  
 cgagggaagg agagctgcag cccctgcagt tgcccctgcc cctggccccg 450  
 cccccaggc ccccttgac ttcaggggca tgttgaggaa actgttcagc 500



Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala
				125					130					135
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe
				140					145					150
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser
				155					160					165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val
				170					175					180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe
				185					190					195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala
				200					205					210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu
				215					220					225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala
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Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp
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<210> 288

<211> 3334

<212> DNA

<213> Homo sapiens

<400> 288

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<210> 289  
 <211> 469  
 <212> PRT  
 <213> Homo sapiens

<400> 289  
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 35 40 45  
 Ser Thr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp  
 50 55 60  
 Lys Asp Leu Asp Gly Gln Leu Asp Phe Glu Glu Phe Val His Tyr  
 65 70 75  
 Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu  
 80 85 90



Gln Ala Gln Ala Ser Ile Glu Gly Ala Pro Glu Val Thr Met Ser  
 410 415 420

Ser Leu Phe Lys His Ile Leu Arg Thr Glu Gly Ala Phe Gly Leu  
 425 430 435

Tyr Arg Gly Leu Ala Pro Asn Phe Met Lys Val Ile Pro Ala Val  
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Ser Ile Ser Tyr Val Val Tyr Glu Asn Leu Lys Ile Thr Leu Gly  
 455 460 465

Val Gln Ser Arg

<210> 290  
 <211> 1658  
 <212> DNA  
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<210> 291  
 <211> 282  
 <212> PRT  
 <213> Homo sapiens

<400> 291  
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 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala  
 35 40 45  
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro  
 50 55 60  
 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly  
 65 70 75  
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu  
 80 85 90  
 Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala  
 95 100 105  
 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val  
 110 115 120  
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser  
 125 130 135  
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe  
 140 145 150  
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr





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<210> 293  
 <211> 180  
 <212> PRT  
 <213> Homo sapiens

<400> 293  
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 Gly Leu Gln Arg Val His Glu Pro Thr Trp Ala Gln Gln Leu Leu  
 35 40 45  
 Gln Glu Met Lys Thr Leu Phe Leu Asn Thr Glu Tyr Leu Met Pro  
 50 55 60  
 Phe Leu Leu Asn Gln Cys Gly Ser Leu Leu Tyr Tyr Leu Thr Leu  
 65 70 75  
 Ala Ser Thr Asp Leu Thr Leu Ala Val Pro Ile Cys Asn Ser Leu  
 80 85 90  
 Ala Ile Ile Phe Thr Leu Ile Val Gly Lys Ala Leu Gly Glu Asp  
 95 100 105  
 Ile Gly Gly Lys Arg Lys Leu Asp Tyr Cys Glu Cys Gly Thr Gln  
 110 115 120  
 Leu Cys Gly Ser Arg His Thr Cys Val Ser Ser Phe Pro Glu Pro  
 125 130 135  
 Ile Ser Pro Glu Trp Val Arg Thr Arg Pro Phe Pro Ile Leu Pro  
 140 145 150

Phe Pro Leu Gln Leu Phe Cys Phe Leu Val Ala Ile Arg Val Pro  
155 160 165

Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp  
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<210> 294  
<211> 1164  
<212> DNA  
<213> Homo sapiens

<400> 294  
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<210> 295  
<211> 237  
<212> PRT

<213> Homo sapiens

<400> 295

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35 40 45  
Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro  
50 55 60  
Val Arg Leu Tyr Gln Asn Met Phe Cys Ser Ala Glu Asn Cys Ser  
65 70 75  
Glu Glu Thr His Ile Thr Ala Phe Thr Val His Val Ser Ala Glu  
80 85 90  
Glu His Phe His Phe Val Ser Gln Cys Cys Gln Gly Lys Glu Cys  
95 100 105  
Ser Asn Thr Ser Asp Ala Leu Asp Pro Pro Leu Lys Asn Val Ser  
110 115 120  
Ser Asn Ala Glu Cys Pro Ala Cys Tyr Glu Ser Asn Gly Thr Ser  
125 130 135  
Cys Arg Gly Lys Pro Trp Lys Cys Tyr Glu Glu Glu Gln Cys Val  
140 145 150  
Phe Leu Val Ala Glu Leu Lys Asn Asp Ile Glu Ser Lys Ser Leu  
155 160 165  
Val Leu Lys Gly Cys Ser Asn Val Ser Asn Ala Thr Cys Gln Phe  
170 175 180  
Leu Ser Gly Glu Asn Lys Thr Leu Gly Gly Val Ile Phe Arg Lys  
185 190 195  
Phe Glu Cys Ala Asn Val Asn Ser Leu Thr Pro Thr Ser Ala Pro  
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<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

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<210> 297

<211> 341

<212> PRT

<213> Homo sapiens

<400> 297

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				20					25					30

Thr	Glu	Met	Gln	Arg	Val	Ser	Leu	Arg	Phe	Gly	Gly	Pro	Met	Thr
				35					40					45

Arg	Ser	Tyr	Arg	Ser	Thr	Ala	Arg	Thr	Gly	Leu	Pro	Arg	Lys	Thr
				50					55					60

Arg	Ile	Ile	Leu	Glu	Asp	Glu	Asn	Asp	Ala	Met	Ala	Asp	Ala	Asp
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<211> 461  
 <212> PRT  
 <213> Homo sapiens

<400> 301

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Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	
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Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	
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Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	
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Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	
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Leu Gln Gln Tyr Arg Gln Val His Leu Leu Pro Gly Leu Trp Glu		
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Gln Gly Trp Cys Glu Ile Thr Ala His Leu Leu Ala Leu Pro Glu		
380	385	390
His Asp Ala Arg Glu Lys Val Leu Gln Thr Leu Gly Val Leu Leu		
395	400	405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln Asp Pro Gln Leu Gly Arg		
410	415	420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr Gln Val Leu Ala Ser Leu		
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<210> 302

<211> 2136

<212> DNA

<213> Homo sapiens

<400> 302

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 <212> PRT  
 <213> Homo sapiens

<400> 303

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				20					25					30	
Arg	Val	Ile	Ile	Leu	Val	Ala	Gly	Ala	Phe	Phe	Trp	Leu	Val	Ser	
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Leu	Leu	Leu	Ala	Ser	Val	Val	Trp	Phe	Ile	Leu	Val	His	Val	Thr	
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Asp	Arg	Ser	Asp	Ala	Arg	Leu	Gln	Tyr	Gly	Leu	Leu	Ile	Phe	Gly	
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Ala	Ala	Val	Ser	Val	Leu	Leu	Gln	Glu	Val	Phe	Arg	Phe	Ala	Tyr	
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Tyr	Lys	Leu	Leu	Lys	Lys	Ala	Asp	Glu	Gly	Leu	Ala	Ser	Leu	Ser	
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Glu	Asp	Gly	Arg	Ser	Pro	Ile	Ser	Ile	Arg	Gln	Met	Ala	Tyr	Val	
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Ser	Gly	Leu	Ser	Phe	Gly	Ile	Ile	Ser	Gly	Val	Phe	Ser	Val	Ile	
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Asn	Ile	Leu	Ala	Asp	Ala	Leu	Gly	Pro	Gly	Val	Val	Gly	Ile	His	
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Gly	Asp	Ser	Pro	Tyr	Tyr	Phe	Leu	Thr	Ser	Ala	Phe	Leu	Thr	Ala	
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Ala	Ile	Ile	Leu	Leu	His	Thr	Phe	Trp	Gly	Val	Val	Phe	Phe	Asp	
				170					175					180	
Ala	Cys	Glu	Arg	Arg	Arg	Tyr	Trp	Ala	Leu	Gly	Leu	Val	Val	Gly	
				185					190					195	
Ser	His	Leu	Leu	Thr	Ser	Gly	Leu	Thr	Phe	Leu	Asn	Pro	Trp	Tyr	
				200					205					210	
Glu	Ala	Ser	Leu	Leu	Pro	Ile	Tyr	Ala	Val	Thr	Val	Ser	Met	Gly	
				215					220					225	
Leu	Trp	Ala	Phe	Ile	Thr	Ala	Gly	Gly	Ser	Leu	Arg	Ser	Ile	Gln	
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Arg	Ser	Leu	Leu	Cys	Lys	Asp									
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<210> 304  
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 <212> DNA  
 <213> Homo sapiens

<220>

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<223> unknown base

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<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332  
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<210> 306  
<211> 655  
<212> DNA  
<213> Homo sapiens

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<211> 293  
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<400> 309

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Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly
			35						40					45
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser
			50						55					60
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met
			65						70					75
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln
			80						85					90
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr
			95						100					105
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His
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Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln
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Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His
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Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro
			155						160					165
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser
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Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser
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Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser
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Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile
			215						220					225
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser
			230						235					240
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu
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Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile
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 tctctccag cctccccaat gcccaacccc accccgttcc cctggtgccc 1900  
 agagaaccca cctctccccc aagggcctca gectggctgt gggctgggtg 1950  
 gcccatctc accaggccct gaggtcagga tggggagctg ctgccttttg 2000  
 ggacccacgc tccaaggctg agaccagttc cctggaggcc acccaccctg 2050  
 tgccccgca ggctgggggt ctgcagctct cttacctgct gtgcccaact 2100  
 gctctctgtc tcaaatgagg cccaacccat cccccaccca gctccgggcc 2150

gtcctcctac ctggggcagc cggggctgcc atcccatttc tctgcctct 2200  
 ggaaggtggg tggggccctg caccgtgggg ctggactgcg ctaatgggaa 2250  
 gctcttggtt ttctgggctg gggcctaggg agggctggga tgaggcttgt 2300  
 acaaccccca ccaccaattt ccaggggact ccagggtcct gaggcctccc 2350  
 aggagggcct tgggggtgat gacccttcc ctgaggtggc tgtctccatg 2400  
 aggaggccaa ccttgccat tgaccgtggc cactggacc caggccaggc 2450  
 ccggcccgcc gagtgggtcaa gggacaggga ccacctcacc gggcaaatgg 2500  
 ggtcgggggg actggggcac cagaccaggc accacctgga cactttcttg 2550  
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 cacatgcaga ggtgagaccc gcagggtccc aggaccagca gccacaaggg 2650  
 cagggttgga gccgggtcct cagctgtctg ctacagcagg ctggaccgcg 2700  
 gtgcgttacg tcaggcccag atgcaggggc gcttttccaa ggccctctga 2750  
 tgggggcctc cgaaagggtt ggagtcagcc ttggggagct gcctagcagc 2800  
 ctctcctcgg gcaggagggg aggtggcttc ctccaaagga ccccgatgg 2850  
 cagggtgccta ggggtgtgg ggttccttc tcccttcccc tccactgaa 2900  
 gtttgtgctt aaaaaacaat aaatttgact tggcaccact gggggttgtt 2950  
 gggagagggc gtgtgacctg gctctctgtc ccagtgcac caggatcatc 3000  
 acatgcgcag 3010

<210> 314  
 <211> 461  
 <212> PRT  
 <213> Homo sapiens

<400> 314  
 Met Val Asn Asp Arg Trp Lys Thr Met Gly Gly Ala Ala Gln Leu  
 1 5 10  
 Glu Asp Arg Pro Arg Asp Lys Pro Gln Arg Pro Ser Cys Gly Tyr  
 20 25 30  
 Val Leu Cys Thr Val Leu Leu Ala Leu Ala Val Leu Leu Ala Val  
 35 40 45  
 Ala Val Thr Gly Ala Val Leu Phe Leu Asn His Ala His Ala Pro  
 50 55 60  
 Gly Thr Ala Pro Pro Pro Val Val Ser Thr Gly Ala Ala Ser Ala  
 65 70 75  
 Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu  
 80 85 90  
 Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp Leu Thr Asp Ser Phe  
 95 100 105

Ala Arg Leu Glu Ser	Ala Gln Ala Ser	Val Leu Gln Ala Leu Thr
110	115	120
Glu His Gln Ala Gln	Pro Arg Leu Val	Gly Asp Gln Glu Gln Glu
125	130	135
Leu Leu Asp Thr Leu	Ala Asp Gln Leu	Pro Arg Leu Leu Ala Arg
140	145	150
Ala Ser Glu Leu Gln	Thr Glu Cys Met	Gly Leu Arg Lys Gly His
155	160	165
Gly Thr Leu Gly Gln	Gly Leu Ser Ala	Leu Gln Ser Glu Gln Gly
170	175	180
Arg Leu Ile Gln Leu	Leu Ser Glu Ser	Gln Gly His Met Ala His
185	190	195
Leu Val Asn Ser Val	Ser Asp Ile Leu	Asp Ala Leu Gln Arg Asp
200	205	210
Arg Gly Leu Gly Arg	Pro Arg Asn Lys	Ala Asp Leu Gln Arg Ala
215	220	225
Pro Ala Arg Gly Thr	Arg Pro Arg Gly	Cys Ala Thr Gly Ser Arg
230	235	240
Pro Arg Asp Cys Leu	Asp Val Leu Leu	Ser Gly Gln Gln Asp Asp
245	250	255
Gly Val Tyr Ser Val	Phe Pro Thr His	Tyr Pro Ala Gly Phe Gln
260	265	270
Val Tyr Cys Asp Met	Arg Thr Asp Gly	Gly Gly Trp Thr Val Phe
275	280	285
Gln Arg Arg Glu Asp	Gly Ser Val Asn	Phe Phe Arg Gly Trp Asp
290	295	300
Ala Tyr Arg Asp Gly	Phe Gly Arg Leu	Thr Gly Glu His Trp Leu
305	310	315
Gly Leu Lys Arg Ile	His Ala Leu Thr	Thr Gln Ala Ala Tyr Glu
320	325	330
Leu His Val Asp Leu	Glu Asp Phe Glu	Asn Gly Thr Ala Tyr Ala
335	340	345
Arg Tyr Gly Ser Phe	Gly Val Gly Leu	Phe Ser Val Asp Pro Glu
350	355	360
Glu Asp Gly Tyr Pro	Leu Thr Val Ala	Asp Tyr Ser Gly Thr Ala
365	370	375
Gly Asp Ser Leu Leu	Lys His Ser Gly	Met Arg Phe Thr Thr Lys
380	385	390
Asp Arg Asp Ser Asp	His Ser Glu Asn	Asn Cys Ala Ala Phe Tyr
395	400	405
Arg Gly Ala Trp Trp	Tyr Arg Asn Cys	His Thr Ser Asn Leu Asn
410	415	420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val  
 425 430 435  
 Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser  
 440 445 450  
 Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg  
 455 460

<210> 315  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 315  
 cacacgtcca acctcaatgg gcag 24

<210> 316  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 316  
 gaccagcagg gcccaaggaca agg 23

<210> 317  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 317  
 gttctctgag atgaagatcc ggcgggtccg ggagtaccgc ttag 44

<210> 318  
 <211> 1841  
 <212> DNA  
 <213> Homo sapiens

<400> 318  
 gcagtcagag acttccccctg ccctctgctg ggaaagaaca ttaggaatgc 50  
 ctttttagtgc ctgtcttctt gaactagctc acagtagccc ggcgggccag 100  
 ggcaatccga ccacatttca ctctcaccgc tgtaggaatc catgatgcagg 150  
 ccaagtacag cagcaccagg gacatgctgg atgatgatgg ggacaccacc 200  
 atgagcctgc attctcaagc ctctgccaca actcggcatc cagagccccg 250  
 gcgcacagag cacagggtct cctcttcaac gtggcgacca gtggcctga 300  
 ccctgctgac tttgtgcttg gtgctgctga tagggctggc agccctgggg 350  
 cttttgtttt ttcagtacta ccagctctcc aatactggtc aagacacccat 400

ttctcaaatg gaagaaagat taggaaatag gtcccaagag ttgcaatctc 450  
 ttcaagtcca gaatataaag cttgcaggaa gtctgcagca tgtggctgaa 500  
 aaactctgtc gtgagctgta taacaaagct ggagcacaca ggtgcagccc 550  
 ttgtacagaa caatggaaat ggcatggaga caattgtctac cagttctata 600  
 aagacagcaa aagttgggag gactgtaaat atttctgcct tagtgaanaac 650  
 tctaccatgc tgaagataaa caaacaagaa gacctggaat ttgccgcgtc 700  
 tcagagctac tctgagtttt tctactotta ttggacaggg cttttgcgcc 750  
 ctgacagtgg caaggcctgg ctgtggatgg atggaacccc ttctacttct 800  
 gaactgttcc atattataat agatgtcacc agccaagaa gcagagactg 850  
 tgtggccatc ctcaatggga tgatcttctc aaaggactgc aaagaattga 900  
 agcgttgtgt ctgtgagaga agggcaggaa tggagaagcc agagagcctc 950  
 catgtcccc ctgaacatt aggcgaaggt gactgattcg cctctgcaa 1000  
 ctacaaatag cagagtgcgc caggcgggtgc caaagcaagg gctagttag 1050  
 acattgggaa atggaacata atcaggaaag actatctctc tgactagtac 1100  
 aaaatgggtt ctctgttttc ctgttcagga tcaccagcat ttctgagctt 1150  
 gggtttatgc acgtatttaa cagtcacaag aagtcttatt tacatgccac 1200  
 caaccaacct cagaaaccca taatgtcatc tgccttctgt gcttagagat 1250  
 aacttttagc tctctttctt ctcaatgtct aatatcacct cctgttttc 1300  
 atgtcttctt tacacttggt ggaataagaa actttttgaa gttagggaaa 1350  
 tacattgagg taacatcctt ttctctgaca gtcaagtagt ccatcagaaa 1400  
 ttggcagtea cttccagat tgtaacagca aatacacaag gaattctttt 1450  
 tgtttgttcc agttcatact agtccttcc caatccatca gtaaagaccc 1500  
 catctgcctt gtccatgccg ttcccaaca gggatgtcac ttgatagag 1550  
 aatctcaaat ctcaatgcct tataagcatt ccttctgtg tccattaaga 1600  
 ctctgataat tgtctccct ccataggaat ttctccagg aaagaatat 1650  
 atccccatct cgtttcata tcagaactac cgtcccgat attcccttca 1700  
 gagagattaa agaccagaaa aaagttagcc tcttcatctg cacctgtaat 1750  
 agtttcagtt cctatcttct tccattgacc catatttata ccttccaggt 1800  
 actgaagatt taataataat aaatgtaaat actgtgaaa a 1841

<210> 319  
 <211> 280  
 <212> PRT  
 <213> Homo sapiens



<400> 319

Met	Gln	Ala	Lys	Tyr	Ser	Ser	Thr	Arg	Asp	Met	Leu	Asp	Asp	Asp
1				5					10					15
Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr
				20					25					30
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
				35					40					45
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
				50					55					60
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr
				65					70					75
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
				80					85					90
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
				95					100					105
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115					120
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130					135
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
				140					145					150
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys
				155					160					165
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp
				170					175					180
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser
				185					190					195
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu
				200					205					210
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile
				215					220					225
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu
				230					235					240
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys
				245					250					255
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His
				260					265					270
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp					
				275					280					

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>  
<221> unsure  
<222> 59, 95, 149, 331, 364, 438, 446  
<223> unknown base

<400> 320  
aattttcacc gctgtaggaa tccagatgca ggccaagtac agcagcacga 50  
gggacatgnt ggatgatgat gggacaccac catgagcctg cattntcaag 100  
cttttgcac aattcgcat ccagagcccc ggcgcacaga gcacagggnt 150  
cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200  
ggtgctgctg atagggtggt cagccctggg gcttttgttt ttctagtact 250  
accagctctc caatactggt caagacacca ttctcaaat ggaagaaaga 300  
ttaggaaata cgtccaaga gttgcaattt ntcaagtc agaataataa 350  
gcttgacaga agtntgcagc atgtggctga aaaactctgt cgtgagctgt 400  
atacaaaagc tggaggaaact ttgaaggagg gcaaagtntc ctcatntact 450  
atacacacac cacttccc 468

<210> 321  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 321  
atgcaggcca agtacagcag cac 23

<210> 322  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 322  
catgctgacg acttcttgca agc 23

<210> 323  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 323  
ccacacagtc tctgcttctt ggg 23

<210> 324  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 324  
atgctggatg atgatgggga caccaccatg agcctgcatt 40

<210> 325  
<211> 2988  
<212> DNA  
<213> Homo sapiens

<400> 325  
gccgagcgca agaaccctgc gcagcccaga gcagctgctg gaggggaatc 50  
gaggcgcggc tccggggatt cggctcgggc cgctggctct gctctgcggg 100  
gaggggagcgg gcccgcccg gcggcccgag cctcccgat ccgccccctc 150  
cccggtcccg cccctcggga gactcctctg gctgctctgg gggttcgccc 200  
gggcgcggga ccccggttc gggcgccatg cgggcacgc tgctgctgctc 250  
ggtgctgcgg cccgcagggc ccgtggccgt gggcatctcc ctgggcttca 300  
ccctgagcct gctcagcgtc acctgggtgg aggagccgtg cggcccagge 350  
ccgccccaac ctggagactc tgagctgccg ccgcgcggca acaccaacgc 400  
ggcgcgccgg cccaactcgg tgcagcccgg agcggagcgc gagaagcccg 450  
gggcgcggca aggcgcggg gagaattggg agccgcgcgt cttgccctac 500  
caccctgcac agcccggcc ggcgcgcaaa aaggccgtca ggaccgccta 550  
catcagcacg gagctgggca tcaggcagag gctgctggtg gcggtgctga 600  
cctctcagac cacgctgcc acgctgggcg tggccgtgaa ccgcacgctg 650  
gggcaaccgc tggagcgtgt ggtgttcctg acgggcgcac ggggcccgcg 700  
ggccccacct ggcatggcag tggtgacgct gggcgaggag cgaccattg 750  
gacacctgca cctggcgcgt cgccacctgc tggagcagca cggcgacgac 800  
tttgactggt tcttcctggt gctgacacc acctacacgg aggcgcacgg 850  
cctggcaacg ctaactggcc acctcagcct ggctccgccc gccacactgt 900  
acctgggcgg gccccaggac ttcacggcg gagagccac ccccggcgcg 950  
tactgccacg gaggtcttgg ggtgctgctg tcgcgcacgc tgctgcaaca 1000  
actgcgcccc cacctggaag gctgcgcgaa cgacatcgct agtgcgcgcc 1050  
ctgacgagtg gctgggtcgc tgcattctcg atgccaccgg ggtgggctgc 1100  
actggtgacc acgagggggg gcaactatag catctggagg tgagccctgg 1150  
ggagccagtg caggaggggg acctcattt cgaagtgcc ctgacagccc 1200  
accctgtgcg tgacctgtg cacatgtacc agctgcacaa agctttcgcc 1250  
cgagctgaac tggaacgcac gtaccaggag atccaggagt tacagtggga 1300



gagctgagga gggggcatct cccaacttct cccttttggg cctgcccga 2950  
gtccctgcc tttataaac tggccaagtg tggaaaaa 2988

<210> 326  
<211> 775  
<212> PRT  
<213> Homo sapiens

<400> 326  
Met Arg Ala Ser Leu Leu Ser Val Leu Arg Pro Ala Gly Pro  
1 5 10 15  
Val Ala Val Gly Ile Ser Leu Gly Phe Thr Leu Ser Leu Leu Ser  
20 25 30  
Val Thr Trp Val Glu Glu Pro Cys Gly Pro Gly Pro Pro Gln Pro  
35 40 45  
Gly Asp Ser Glu Leu Pro Pro Arg Gly Asn Thr Asn Ala Ala Arg  
50 55 60  
Arg Pro Asn Ser Val Gln Pro Gly Ala Glu Arg Glu Lys Pro Gly  
65 70 75  
Ala Gly Glu Gly Ala Gly Glu Asn Trp Glu Pro Arg Val Leu Pro  
80 85 90  
Tyr His Pro Ala Gln Pro Gly Gln Ala Ala Lys Lys Ala Val Arg  
95 100 105  
Thr Arg Tyr Ile Ser Thr Glu Leu Gly Ile Arg Gln Arg Leu Leu  
110 115 120  
Val Ala Val Leu Thr Ser Gln Thr Thr Leu Pro Thr Leu Gly Val  
125 130 135  
Ala Val Asn Arg Thr Leu Gly His Arg Leu Glu Arg Val Val Phe  
140 145 150  
Leu Thr Gly Ala Arg Gly Arg Arg Ala Pro Gly Met Ala Val  
155 160 165  
Val Thr Leu Gly Glu Glu Arg Pro Ile Gly His Leu His Leu Ala  
170 175 180  
Leu Arg His Leu Leu Glu Gln His Gly Asp Asp Phe Asp Trp Phe  
185 190 195  
Phe Leu Val Pro Asp Thr Thr Tyr Thr Glu Ala His Gly Leu Ala  
200 205 210  
Arg Leu Thr Gly His Leu Ser Leu Ala Ser Ala Ala His Leu Tyr  
215 220 225  
Leu Gly Arg Pro Gln Asp Phe Ile Gly Gly Glu Pro Thr Pro Gly  
230 235 240  
Arg Tyr Cys His Gly Gly Phe Gly Val Leu Leu Ser Arg Met Leu  
245 250 255  
Leu Gln Gln Leu Arg Pro His Leu Glu Gly Cys Arg Asn Asp Ile  
260 265 270



Ser Val Gln Thr Ala Ala Pro Ser Pro Leu Arg Leu Met Asp Leu  
 590 595 600  
 Leu Ser Lys Lys His Pro Leu Asp Thr Leu Phe Leu Leu Ala Gly  
 605 610 615  
 Pro Asp Thr Val Leu Thr Pro Asp Phe Leu Asn Arg Cys Arg Met  
 620 625 630  
 His Ala Ile Ser Gly Trp Gln Ala Phe Phe Pro Met His Phe Gln  
 635 640 645  
 Ala Phe His Pro Gly Val Ala Pro Pro Gln Gly Pro Gly Pro Pro  
 650 655 660  
 Glu Leu Gly Arg Asp Thr Gly Arg Phe Asp Arg Gln Ala Ala Ser  
 665 670 675  
 Glu Ala Cys Phe Tyr Asn Ser Asp Tyr Val Ala Ala Arg Gly Arg  
 680 685 690  
 Leu Ala Ala Ala Ser Glu Gln Glu Glu Leu Leu Glu Ser Leu  
 695 700 705  
 Asp Val Tyr Glu Leu Phe Leu His Phe Ser Ser Leu His Val Leu  
 710 715 720  
 Arg Ala Val Glu Pro Ala Leu Leu Gln Arg Tyr Arg Ala Gln Thr  
 725 730 735  
 Cys Ser Ala Arg Leu Ser Glu Asp Leu Tyr His Arg Cys Leu Gln  
 740 745 750  
 Ser Val Leu Glu Gly Leu Gly Ser Arg Thr Gln Leu Ala Met Leu  
 755 760 765  
 Leu Phe Glu Gln Glu Gln Gly Asn Ser Thr  
 770 775

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg cgcgaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgatgttctg 20

<210> 329

<211> 20

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 329  
atggctcagt gtgcagacag 20

<210> 330  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 330  
gcatgctgct ccgtgaagta gtcc 24

<210> 331  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 331  
atgcatggga aagaaggcct gcc 24

<210> 332  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 332  
tgcactgggtg accacgaggg ggtgcactat agccatctgg agctgag 47

<210> 333  
<211> 1095  
<212> DNA  
<213> Homo sapiens

<400> 333  
gctctggcgc gccccggcga ttggtcaccg cccgctaggg gacagccctg 50  
gcctcctctg attggcaagc gctggccacc tccccacacc ccttgccaac 100  
gctcccctag tggagaaaag gtagtagctat tagccaatto ggcaggggccc 150  
gctttttaga agcttgattt cctttgaaga tgaagacta gcggaagctc 200  
tgctcttttc ccagtgggc gagggaactc ggggcgattg gctgggaact 250  
gtatccaccc aaatgtcacc gatttcttcc tatgcaggaa atgacgagac 300  
ccatcaataa gaaatttttc agcctggcgc aaaatggttg gccccacgaa 350  
gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400



aaaaccaa at cagatctggg acctatatag cgtggcggag gcggggcgat 450  
 gattgtcgcg ctgcaccca ctgcagctgc gcacagtcgc atttctttcc 500  
 ccgccccgtg gacctgcag caccatctgt catggcgctt gggctgtttg 550  
 gtttgagcgc tcgccgtctt ttggcggcag cggcgacgag agggctcccg 600  
 gccgcccgcg tccgctggga atctagcttc tccaggactg tggctgcccc 650  
 gtccgctgtg gcgggaaagc ggccccaga accgaccaca ccgtggcaag 700  
 aggaccaga acccgaggac gaaaacttgt atgagaagaa cccagactcc 750  
 catggttatg acaaggaccc cgttttggac gtctggaaca tgcgacttgt 800  
 cttcttcttt ggctctcca tcatcctggt ccttggcagc acctttgttg 850  
 cctatctgcc tgactacagg atgaaagagt ggtcccgccg cgaagctgag 900  
 aggtcttgta aataccgaga ggccaatggc cttcccatca tggaatccaa 950  
 ctgcttgcag cccagcaaga tccagctgcc agaggatgag tgaccagttg 1000  
 ctaagtgggg ctcaagaagc accgccttcc ccacccctcg cctgccattc 1050  
 tgacctcttc tcagagcacc taattaaagg ggctgaaagt ctgaa 1095

<210> 334  
 <211> 153  
 <212> PRT  
 <213> Homo sapiens

<400> 334  
 Met Ala Ala Gly Leu Phe Gly Leu Ser Ala Arg Arg Leu Leu Ala  
 1 5 10 15  
 Ala Ala Ala Thr Arg Gly Leu Pro Ala Ala Arg Val Arg Trp Glu  
 20 25 30  
 Ser Ser Phe Ser Arg Thr Val Val Ala Pro Ser Ala Val Ala Gly  
 35 40 45  
 Lys Arg Pro Pro Glu Pro Thr Thr Pro Trp Gln Glu Asp Pro Glu  
 50 55 60  
 Pro Glu Asp Glu Asn Leu Tyr Glu Lys Asn Pro Asp Ser His Gly  
 65 70 75  
 Tyr Asp Lys Asp Pro Val Leu Asp Val Trp Asn Met Arg Leu Val  
 80 85 90  
 Phe Phe Phe Gly Val Ser Ile Ile Leu Val Leu Gly Ser Thr Phe  
 95 100 105  
 Val Ala Tyr Leu Pro Asp Tyr Arg Met Lys Glu Trp Ser Arg Arg  
 110 115 120  
 Glu Ala Glu Arg Leu Val Lys Tyr Arg Glu Ala Asn Gly Leu Pro  
 125 130 135  
 Ile Met Glu Ser Asn Cys Phe Asp Pro Ser Lys Ile Gln Leu Pro  
 140 145 150

Glu Asp Glu

<210> 335  
<211> 442  
<212> DNA  
<213> Homo sapiens

<400> 335  
ggcggctggg ctgtttggtt tgagcgcctg ccgtcttttg gcggcagcgg 50  
cgacgcgagg gctcccggcc gcccgcgctc gctgggaatc tagcttctcc 100  
aggactgtgg tcgcccgcgc cgctgtggcg ggaaagcggc cccagaacc 150  
gaccacaccg tggcaagagg acccagaacc cgaggacgaa aacttgatg 200  
agaagaacc agactcccat ggttatgaca aggaccccg tttggacgtc 250  
tggaacatgc gacttgctt cttctttggc gtctccatca tcctggctct 300  
tggcagcacc tttgtggcct atctgcctga ctacaggatg aaagagtgg 350  
ccgcgcgca agctgagagg cttgtgaaat accgagaggc caatggcctt 400  
cccatcatgg aatccaactg cttcgacccc agcaagatcc ag 442

<210> 336  
<211> 23  
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<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 336  
ctgagaccct gcagcaccat ctg 23

<210> 337  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 337  
ggtgcttctt gagccccact tagc 24

<210> 338  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 338  
aatctagctt ctccaggact gtggtcgccc cgctcgctgt 40

<210> 339  
<211> 2162  
<212> DNA

<213> Homo sapiens

<400> 339

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cggttggtgc cttgcagaac cccacgcga cagcctgcgg gaggaacttg 100  
tcacacccc gctgccttcc ggggacgtag ccgccacatt ccagttccgc 150  
acgcgctggg attcggagct tcagcgggaa ggagtgtccc attacaggct 200  
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tgcacctgtc attcacaaa ggcttttga ggaccgata ctgggggcca 300  
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ggccacctct atattgaggt gctcaataag caaaagtggc cggctggctg 2000  
tgtattggac agcacagaaa aagatttcca tcaccacaga aagtcgggt 2050  
ggcagcactg gccaaagtga tgggggtgtc tacacagtgt atgtcactgt 2100  
gtagtggatg gagtttactg tttgtggaat aaaaacggct gtttcctgtg 2150  
aaaaaaaa aa 2162

<210> 340  
<211> 574  
<212> PRT  
<213> Homo sapiens

<400> 340  
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Trp Cys Leu Ala Glu Pro Pro Arg Asp Ser Leu Arg Glu Glu Leu  
20 25 30  
Val Ile Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln  
35 40 45  
Phe Arg Thr Arg Trp Asp Ser Glu Leu Gln Arg Glu Gly Val Ser  
50 55 60  
His Tyr Arg Leu Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys  
65 70 75  
Tyr Ser Leu Arg Glu Leu His Leu Ser Phe Thr Gln Gly Phe Trp  
80 85 90  
Arg Thr Arg Tyr Trp Gly Pro Pro Phe Leu Gln Ala Pro Ser Gly  
95 100 105  
Ala Glu Leu Trp Val Trp Phe Gln Asp Thr Val Thr Asp Val Asp  
110 115 120  
Lys Ser Trp Lys Glu Leu Ser Asn Val Leu Ser Gly Ile Phe Cys  
125 130 135  
Ala Ser Leu Asn Phe Ile Asp Ser Thr Asn Thr Val Thr Pro Thr  
140 145 150

Ala	Ser	Phe	Lys	Pro	Leu	Gly	Leu	Ala	Asn	Asp	Thr	Asp	His	Tyr	155	165
Phe	Leu	Arg	Tyr	Ala	Val	Leu	Pro	Arg	Glu	Val	Val	Cys	Thr	Glu	170	180
Asn	Leu	Thr	Pro	Trp	Lys	Lys	Leu	Leu	Pro	Cys	Ser	Ser	Lys	Ala	185	195
Gly	Leu	Ser	Val	Leu	Leu	Lys	Ala	Asp	Arg	Leu	Phe	His	Thr	Ser	200	210
Tyr	His	Ser	Gln	Ala	Val	His	Ile	Arg	Pro	Val	Cys	Arg	Asn	Ala	215	225
Arg	Cys	Thr	Ser	Ile	Ser	Trp	Glu	Leu	Arg	Gln	Thr	Leu	Ser	Val	230	240
Val	Phe	Asp	Ala	Phe	Ile	Thr	Gly	Gln	Gly	Lys	Lys	Asp	Trp	Ser	245	255
Leu	Phe	Arg	Met	Phe	Ser	Arg	Thr	Leu	Thr	Glu	Pro	Cys	Pro	Leu	260	270
Ala	Ser	Glu	Ser	Arg	Val	Tyr	Val	Asp	Ile	Thr	Thr	Tyr	Asn	Gln	275	285
Asp	Asn	Glu	Thr	Leu	Glu	Val	His	Pro	Pro	Pro	Thr	Thr	Thr	Tyr	290	300
Gln	Asp	Val	Ile	Leu	Gly	Thr	Arg	Lys	Thr	Tyr	Ala	Ile	Tyr	Asp	305	315
Leu	Leu	Asp	Thr	Ala	Met	Ile	Asn	Asn	Ser	Arg	Asn	Leu	Asn	Ile	320	330
Gln	Leu	Lys	Trp	Lys	Arg	Pro	Pro	Glu	Asn	Glu	Ala	Pro	Pro	Val	335	345
Pro	Phe	Leu	His	Ala	Gln	Arg	Tyr	Val	Ser	Gly	Tyr	Gly	Leu	Gln	350	360
Lys	Gly	Glu	Leu	Ser	Thr	Leu	Leu	Tyr	Asn	Thr	His	Pro	Tyr	Arg	365	375
Ala	Phe	Pro	Val	Leu	Leu	Leu	Asp	Thr	Val	Pro	Trp	Tyr	Leu	Arg	380	390
Leu	Tyr	Val	His	Thr	Leu	Thr	Ile	Thr	Ser	Lys	Gly	Lys	Glu	Asn	395	405
Lys	Pro	Ser	Tyr	Ile	His	Tyr	Gln	Pro	Ala	Gln	Asp	Arg	Leu	Gln	410	420
Pro	His	Leu	Leu	Glu	Met	Leu	Ile	Gln	Leu	Pro	Ala	Asn	Ser	Val	425	435
Thr	Lys	Val	Ser	Ile	Gln	Phe	Glu	Arg	Ala	Leu	Leu	Lys	Trp	Thr	440	450
Glu	Tyr	Thr	Pro	Asp	Pro	Asn	His	Gly	Phe	Tyr	Val	Ser	Pro	Ser	445	465

Val	Leu	Ser	Ala	Leu	Val	Pro	Ser	Met	Val	Ala	Ala	Lys	Pro	Val
				470					475					480
Asp	Trp	Glu	Glu	Ser	Pro	Leu	Phe	Asn	Ser	Leu	Phe	Pro	Val	Ser
				485					490					495
Asp	Gly	Ser	Asn	Tyr	Phe	Val	Arg	Leu	Tyr	Thr	Glu	Pro	Leu	Leu
				500					505					510
Val	Asn	Leu	Pro	Thr	Pro	Asp	Phe	Ser	Met	Pro	Tyr	Asn	Val	Ile
				515					520					525
Cys	Leu	Thr	Cys	Thr	Val	Val	Ala	Val	Cys	Tyr	Gly	Ser	Phe	Tyr
				530					535					540
Asn	Leu	Leu	Thr	Arg	Thr	Phe	His	Ile	Glu	Glu	Pro	Arg	Thr	Gly
				545					550					555
Gly	Leu	Ala	Lys	Arg	Leu	Ala	Asn	Leu	Ile	Arg	Arg	Ala	Arg	Gly
				560					565					570

Val Pro Pro Leu

<210> 341  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 341  
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<210> 342  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic oligonucleotide probe

<400> 342  
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<210> 343  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 343  
 tgtatgtgca caccctcacc atcacctoca agggcaagga gaac 44

<210> 344  
 <211> 762  
 <212> DNA  
 <213> Homo sapiens

<400> 344  
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 tgaccctggt ggctgtggaa ggagttaaag agggatataga gaaagcaggg 100  
 gtttgccag ctgacaacgt acgctgcttc aagtcgac cccccagtg 150  
 tcacacagac caggactgtc tgggggaaag gaagtgtgtg tacctgcact 200  
 gtggcttcaa gtgtgtgatt cctgtgaagg aactggaaga aggaggaaac 250  
 aagatgaag atgtgtcaag gccataccct gagccagat gggaggccaa 300  
 gtgtccagcc tctctctcta ccagggtgcc tcagaaatga tgctgggtcc 350  
 tttctacctc tgggggtcac tctcacttg cactgcccc tgagggtcct 400  
 gagacttga atatggaaga agcaataccc aacccccacca aagaaaacct 450  
 gagcttgaag tctttttccc aaaaagagg gaagagtac aaaaagtcca 500  
 gacccaggg acggtacttt ccctctctac ctggtgtccc tcctaatagc 550  
 tcatgaatgg acccctcatg aatgaaacca gtgcccttat aagagacccc 600  
 aaagagctgc ctggcccttc tgcaatgtgt gatcacagct agaaggcact 650  
 gtcagagaag agaaaactgt cctcaccaga tgctgaatct gctggtgcct 700  
 tgatcttga cttccagcc tctagaactg taagaaataa atattgtctg 750  
 tttataatcc aa 762

<210> 345  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 345  
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 Val Thr Leu Val Ala Val Glu Gly Val Lys Glu Gly Ile Glu Lys  
 20 25 30  
 Ala Gly Val Cys Pro Ala Asp Asn Val Arg Cys Phe Lys Ser Asp  
 35 40 45  
 Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys  
 50 55 60  
 Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys  
 65 70 75  
 Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro  
 80 85 90  
 Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser  
 95 100 105  
 Thr Arg Cys Pro Gln Lys  
 110

<210> 346  
 <211> 2528  
 <212> DNA  
 <213> Homo sapiens

<400> 346  
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 gccccaggac atgcagaacc ttctctaga acccgaccca ccaccatgag 150  
 gtctctgctg tggagatgca ggcacctgag ccaaggcgct cagtggctct 200  
 tgcttctggc tgtctctgtc ttctttctct tcgcttgcc ctcttttatt 250  
 aaggagcctc aaacaaagcc ttccaggcat caacgcacag agaactataa 300  
 agaaaggtct ctacagtccc tggcaaagcc taagtccag gcacccacaa 350  
 gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400  
 ctcaacacac aaaccagcc caaggccccc accaccggag acagaggaaa 450  
 ggaggccaac caggcaccgc cggaggagca ggacaaggtg cccacacag 500  
 cacagagggc agcatggaag agcccagaaa aagagaaaaa catggtgaac 550  
 acactgtcac ccagagggca agatgcaggg atggcctctg gcaggacaga 600  
 ggcacaatca tggagagcc aggcacacaa gacgaccaa ggaatgggg 650  
 gccagaccag gaagctgacg gcctccagga cgggtgcaga gaagcaccag 700  
 ggcaaacgag caaccacagc caagacgctc attccaaaaa gtcagcacag 750  
 aatgctggct cccacaggag cagtgtcaac aaggacgaga cagaaaggag 800  
 tgaccacagc agtcatccca cctaaggaga agaaacctca ggccaccca 850  
 cccctgccc ctttcagag cccacgacg cagagaaacc aaagactgaa 900  
 ggccgccaac ttcaaatctg agcctcggtg ggattttgag gaaaaataca 950  
 gcttogaaat aggaggcctt cagacgactt gccctgactc tgtgaagatc 1000  
 aaagcctcca agtgcgtgtg gctccagaaa ctctttctgc ccaacctcac 1050  
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 aacactttgc accacccttt ggcctcatgg agctcaacta ctcttggtg 1150  
 cagaaggctg tgacacgctt cctccagtg cccagcagc agctgctcct 1200  
 ggcagcctc ccgctggga gcctccggtg catcacctgt gccgtggtg 1250  
 gcaacggggg catctgaac aactccaca tgggccagga gatagacagt 1300  
 cagactacg tgttcgatt gagcggagct ctattaaaag gctacgaaca 1350  
 ggaatggggg actcgacat cttctacg ctttaccgct ttctccctga 1400  
 cccagtcact ccttatattg ggcaatcggg gtttcaagaa cgtgcctctt 1450





[illegible]

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Arg Leu Ser Gly	Ala Leu Ile Lys Gly	Tyr Glu Gln Asp Val Gly			
	395		400		405
Thr Arg Thr Ser	Phe Tyr Gly Phe Thr	Ala Phe Ser Leu Thr Gln			
	410		415		420
Ser Leu Leu Ile	Leu Gly Asn Arg Gly	Phe Lys Asn Val Pro Leu			
	425		430		435
Gly Lys Asp Val	Arg Tyr Leu His Phe	Leu Glu Gly Thr Arg Asp			
	440		445		450
Tyr Glu Trp Leu	Glu Ala Leu Leu Met	Asn Gln Thr Val Met Ser			
	455		460		465
Lys Asn Leu Phe	Trp Phe Arg His Arg	Pro Gln Glu Ala Phe Arg			
	470		475		480
Glu Ala Leu His	Met Asp Arg Tyr Leu	Leu Leu His Pro Asp Phe			
	485		490		495
Leu Arg Tyr Met	Lys Asn Arg Phe Leu	Arg Ser Lys Thr Leu Asp			
	500		505		510
Gly Ala His Trp	Arg Ile Tyr Arg Pro	Thr Thr Gly Ala Leu Leu			
	515		520		525
Leu Leu Thr Ala	Leu Gln Leu Cys Asp	Gln Val Ser Ala Tyr Gly			
	530		535		540
Phe Ile Thr Glu	Gly His Glu Arg Phe	Ser Asp His Tyr Tyr Asp			
	545		550		555
Thr Ser Trp Lys	Arg Leu Ile Phe Tyr	Ile Asn His Asp Phe Lys			
	560		565		570
Leu Glu Arg Glu	Val Trp Lys Arg Leu	His Asp Glu Gly Ile Ile			
	575		580		585
Arg Leu Tyr Gln	Arg Pro Gly Pro Gly	Thr Ala Lys Ala Lys Asn			
	590		595		600

<210> 348

<211> 496

<212> DNA

<213> Homo sapiens

<400> 348

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 gaaggacaag ttctaaaac accttacagc ccctctttat tttagtccaa 150  
 agtgcagcaa acacttccat agactttatc acaacaccag agactgcacc 200  
 attcctgcac actataaaag atgcgccagg cttctttacc ggtggtgctg 250  
 cagtccagtg tgcattggagg ataagtgagc agaccgtaca ggagcagcac 300  
 accaggagcc atgagaagtg ccttggaaac caacagggaa acagaactat 350

ctttatacac atccccctcat ggacaagaga tttatttttg cagacagact 400  
 cttccataag tcctttgagt tttgtatgtt gttgacagtt tgcagatata 450  
 tattcgataa atcagtgtag ttgacagtgt tatctgtcac ttattt 496

<210> 349  
 <211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 349  
 Met Arg Gly Pro Gly His Pro Leu Leu Leu Gly Leu Leu Leu Val  
 1 5 10 15  
 Leu Gly Pro Ser Pro Glu Gln Arg Val Glu Ile Val Pro Arg Asp  
 20 25 30  
 Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu  
 35 40 45  
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His  
 50 55 60  
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala  
 65 70 75  
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp  
 80 85 90  
 Lys

<210> 350  
 <211> 1141  
 <212> DNA  
 <213> Homo sapiens

<400> 350  
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 gcggggctcc gcggggccgc gccgctcacc gcaatcgctc tgttggtgct 150  
 gggggctccc ctggtgctgg ccggcgagga ctgctgtggt tacctggacc 200  
 ggaatggctc ctggcatcgc gggtttaact gcgagttctt cacctctgc 250  
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 caccgagagg cagcagaagc actgctggc cttcagcccc aagaccatag 350  
 caggcatcgc ctcagctgtg atcctctttt ttgctgtggt tgccaccacc 400  
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 tgcagccagt ataccatac cccagagacc ccaaagctgg ccttgacc 550  
 ccacagcctg gttcatgta ccacacagt ggtcctgctc cccaatatcc 600

actctaccca gctgggcccc cagtctacaa ccctgcagct cctcctccct 650  
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 tctgetgccc ctctcagtgat gccaaccttg ggagatgccc tcatcctgta 750  
 cctgcatctg gtccctggggg tggcaggagt cctccagcca ccaggcccca 800  
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 aacaggagct gaactagaac tatgaggggt tggggggagg gcttggaatt 900  
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 gctggggccc tactgtttgt cccctctggg ctgggggtggg gggagggagg 1050  
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 ccacatctct ggctgctag attaaagctg taaagacaaa a 1141

<210> 351  
 <211> 197  
 <212> PRT  
 <213> Homo sapiens

<400> 351  
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 20 25 30  
 Cys Leu Trp Tyr Leu Asp Arg Asn Gly Ser Trp His Pro Gly Phe  
 35 40 45  
 Asn Cys Glu Phe Phe Thr Phe Cys Cys Gly Thr Cys Tyr His Arg  
 50 55 60  
 Tyr Cys Cys Arg Asp Leu Thr Leu Leu Ile Thr Glu Arg Gln Gln  
 65 70 75  
 Lys His Cys Leu Ala Phe Ser Pro Lys Thr Ile Ala Gly Ile Ala  
 80 85 90  
 Ser Ala Val Ile Leu Phe Val Ala Val Val Ala Thr Thr Ile Cys  
 95 100 105  
 Cys Phe Leu Cys Ser Cys Cys Tyr Leu Tyr Arg Arg Arg Gln Gln  
 110 115 120  
 Leu Gln Ser Pro Phe Glu Gly Gln Glu Ile Pro Met Thr Gly Ile  
 125 130 135  
 Pro Val Gln Pro Val Tyr Pro Tyr Pro Gln Asp Pro Lys Ala Gly  
 140 145 150  
 Pro Ala Pro Pro Gln Pro Gly Phe Met Tyr Pro Pro Ser Gly Pro  
 155 160 165  
 Ala Pro Gln Tyr Pro Leu Tyr Pro Ala Gly Pro Pro Val Tyr Asn  
 170 175 180

Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro  
185 190 195

Gly Ala

<210> 352  
<211> 3226  
<212> DNA  
<213> Homo sapiens

<400> 352  
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ctcaaatggt ccottgcaac catgtcattt ctactttcct cactgttggc 150  
tctcttaact gtgtccactc cttcatggtg tcagagcact gaagcatctc 200  
caaaacgtag tgatgggaca ccatttcctt ggaataaaa acgacttcct 250  
gagtacgtca tcccagttca ttatgatctc ttgatccagt caaaccttac 300  
cacgctgacc ttctggggaa ccacgaaagt agaaatcaca gccagtcagc 350  
ccaccagcac catcatcctg catagtcacc acctgcagat atctagggcc 400  
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cctggaacac cccctcag agcaaatgac actgctggct ccgagcccc 500  
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ggaactgagg atactagcat caacacaatt tgaacccact gcagctagaa 650  
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caagatcttg ctgctattcc cgactttcag tctggtgcta tggaaaactg 1050  
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gcccaccagt ggtttgggaa cctggtcact atggaatggt ggaatgatct 1200  
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 <211> 941  
 <212> PRT  
 <213> Homo sapiens

<400> 353  
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 50 55 60  
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr  
 65 70 75  
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr  
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 95 100 105  
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu  
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 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala  
 125 130 135  
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His  
 140 145 150  
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser  
 155 160 165  
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr  
 170 175 180  
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp  
 185 190 195  
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu  
 200 205 210  
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val



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Thr	Val	Ala	Glu	Gly 230	Leu	Ile	Glu	Asp	His 235	Phe	Asp	Val	Thr	Val		240
Lys	Met	Ser	Thr	Tyr 245	Leu	Val	Ala	Phe	Ile 250	Ile	Ser	Asp	Phe	Glu		255
Ser	Val	Ser	Lys	Ile 260	Thr	Lys	Ser	Gly	Val 265	Lys	Val	Ser	Val	Tyr		270
Ala	Val	Pro	Asp	Lys 275	Ile	Asn	Gln	Ala	Asp 280	Tyr	Ala	Leu	Asp	Ala		285
Ala	Val	Thr	Leu	Leu 290	Glu	Phe	Tyr	Glu	Asp 295	Tyr	Phe	Ser	Ile	Pro		300
Tyr	Pro	Leu	Pro	Lys 305	Gln	Asp	Leu	Ala	Ala 310	Ile	Pro	Asp	Phe	Gln		315
Ser	Gly	Ala	Met	Glu 320	Asn	Trp	Gly	Leu	Thr 325	Thr	Tyr	Arg	Glu	Ser		330
Ala	Leu	Leu	Phe	Asp 335	Ala	Glu	Lys	Ser	Ser 340	Ala	Ser	Ser	Lys	Leu		345
Gly	Ile	Thr	Val	Thr 350	Val	Ala	His	Glu	Leu 355	Ala	His	Gln	Trp	Phe		360
Gly	Asn	Leu	Val	Thr 365	Met	Glu	Trp	Trp	Asn 370	Asp	Leu	Trp	Leu	Asn		375
Glu	Gly	Phe	Ala	Lys 380	Phe	Met	Glu	Phe	Val 385	Ser	Val	Ser	Val	Thr		390
His	Pro	Glu	Leu	Lys 395	Val	Gly	Asp	Tyr	Phe 400	Phe	Gly	Lys	Cys	Phe		405
Asp	Ala	Met	Glu	Val 410	Asp	Ala	Leu	Asn	Ser 415	Ser	His	Pro	Val	Ser		420
Thr	Pro	Val	Glu	Asn 425	Pro	Ala	Gln	Ile	Arg 430	Glu	Met	Phe	Asp	Asp		435
Val	Ser	Tyr	Asp	Lys 440	Gly	Ala	Cys	Ile	Leu 445	Asn	Met	Leu	Arg	Glu		450
Tyr	Leu	Ser	Ala	Asp 455	Ala	Phe	Lys	Ser	Gly 460	Ile	Val	Gln	Tyr	Leu		465
Gln	Lys	His	Ser	Tyr 470	Lys	Asn	Thr	Lys	Asn 475	Glu	Asp	Leu	Trp	Asp		480
Ser	Met	Ala	Ser	Ile 485	Cys	Pro	Thr	Asp	Gly 490	Val	Lys	Gly	Met	Asp		495
Gly	Phe	Cys	Ser	Arg 500	Ser	Gln	His	Ser	Ser 505	Ser	Ser	Ser	His	Trp		510
His	Gln	Glu	Gly	Val 515	Asp	Val	Lys	Thr	Met 520	Met	Asn	Thr	Trp	Thr		525
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545									550						
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560									565						
Thr	Ser	Lys	Ser	Asn	Met	Val	His	Arg	Phe	Leu	Leu	Lys	Thr	Lys	585
575									580						
Thr	Asp	Val	Leu	Ile	Leu	Pro	Glu	Glu	Val	Glu	Trp	Ile	Lys	Phe	600
590									595						
Asn	Val	Gly	Met	Asn	Gly	Tyr	Tyr	Ile	Val	His	Tyr	Glu	Asp	Asp	615
605									610						
Gly	Trp	Asp	Ser	Leu	Thr	Gly	Leu	Leu	Lys	Gly	Thr	His	Thr	Ala	630
620									625						
Val	Ser	Ser	Asn	Asp	Arg	Ala	Ser	Leu	Ile	Asn	Asn	Ala	Phe	Gln	645
635									640						
Leu	Val	Ser	Ile	Gly	Lys	Leu	Ser	Ile	Glu	Lys	Ala	Leu	Asp	Leu	660
650									655						
Ser	Leu	Tyr	Leu	Lys	His	Glu	Thr	Glu	Ile	Met	Pro	Val	Phe	Gln	675
665									670						
Gly	Leu	Asn	Glu	Leu	Ile	Pro	Met	Tyr	Lys	Leu	Met	Glu	Lys	Arg	690
680									685						
Asp	Met	Asn	Glu	Val	Glu	Thr	Gln	Phe	Lys	Ala	Phe	Leu	Ile	Arg	705
695									700						
Leu	Leu	Arg	Asp	Leu	Ile	Asp	Lys	Gln	Thr	Trp	Thr	Asp	Glu	Gly	720
710									715						
Ser	Val	Ser	Glu	Gln	Met	Leu	Arg	Ser	Glu	Leu	Leu	Leu	Leu	Ala	735
725									730						
Cys	Val	His	Asn	Tyr	Gln	Pro	Cys	Val	Gln	Arg	Ala	Glu	Gly	Tyr	750
740									745						
Phe	Arg	Lys	Trp	Lys	Glu	Ser	Asn	Gly	Asn	Leu	Ser	Leu	Pro	Val	765
755									760						
Asp	Val	Thr	Leu	Ala	Val	Phe	Ala	Val	Gly	Ala	Gln	Ser	Thr	Glu	780
770									775						
Gly	Trp	Asp	Phe	Leu	Tyr	Ser	Lys	Tyr	Gln	Phe	Ser	Leu	Ser	Ser	795
785									790						
Thr	Glu	Lys	Ser	Gln	Ile	Glu	Phe	Ala	Leu	Cys	Arg	Thr	Gln	Asn	810
800									805						
Lys	Glu	Lys	Leu	Gln	Trp	Leu	Leu	Asp	Glu	Ser	Phe	Lys	Gly	Asp	825
815									820						
Lys	Ile	Lys	Thr	Gln	Glu	Phe	Pro	Gln	Ile	Leu	Thr	Leu	Ile	Gly	840
830									835						
Arg	Asn	Pro	Val	Gly	Tyr	Pro	Leu	Ala	Trp	Gln	Phe	Leu	Arg	Lys	



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<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

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His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro	Lys	35	40	45	
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu	Met	50	55	60	
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys	Gly	65	70	75	
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His	Arg	80	85	90	
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys	Arg	95	100	105	
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu	Trp	110	115	120	
Ala	Pro	Gln	Pro	Pro	Ala	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro	125	130	135	
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu	Ile	140	145	150	
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg	Leu				

[illegible]

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<210> 356
<211> 1238
<212> DNA
<213> Homo sapiens
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<210> 357  
 <211> 271  
 <212> PRT  
 <213> Homo sapiens

<400> 357  
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 20 25 30

Asp Ala Cys Ser Val Gln Ile Leu Val Pro Gly Leu Lys Gly Asp 45  
 35  
 Ala Gly Glu Lys Gly Asp Lys Gly Ala Pro Gly Arg Pro Gly Arg 60  
 50 55  
 Val Gly Pro Thr Gly Glu Lys Gly Asp Met Gly Asp Lys Gly Gln 75  
 65 70  
 Lys Gly Ser Val Gly Arg His Gly Lys Ile Gly Pro Ile Gly Ser 90  
 80 85  
 Lys Gly Glu Lys Gly Asp Ser Gly Asp Ile Gly Pro Pro Gly Pro 105  
 95 100  
 Asn Gly Glu Pro Gly Leu Pro Cys Glu Cys Ser Gln Leu Arg Lys 120  
 110 115  
 Ala Ile Gly Glu Met Asp Asn Gln Val Ser Gln Leu Thr Ser Glu 135  
 125 130  
 Leu Lys Phe Ile Lys Asn Ala Val Ala Gly Val Arg Glu Thr Glu 150  
 140 145  
 Ser Lys Ile Tyr Leu Leu Val Lys Glu Glu Lys Arg Tyr Ala Asp 165  
 155 160  
 Ala Gln Leu Ser Cys Gln Gly Arg Gly Gly Thr Leu Ser Met Pro 180  
 170 175  
 Lys Asp Glu Ala Ala Asn Gly Leu Met Ala Ala Tyr Leu Ala Gln 195  
 185 190  
 Ala Gly Leu Ala Arg Val Phe Ile Gly Ile Asn Asp Leu Glu Lys 210  
 200 205  
 Glu Gly Ala Phe Val Tyr Ser Asp His Ser Pro Met Arg Thr Phe 225  
 215 220  
 Asn Lys Trp Arg Ser Gly Glu Pro Asn Asn Ala Tyr Asp Glu Glu 240  
 230 235  
 Asp Cys Val Glu Met Val Ala Ser Gly Gly Trp Asn Asp Val Ala 255  
 245 250  
 Cys His Thr Thr Met Tyr Phe Met Cys Glu Phe Asp Lys Glu Asn 270  
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Met

<210> 358

<211> 972

<212> DNA

<213> Homo sapiens

<400> 358

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gttctctgat cctgccagac caccagccc ccggcacaga gctgctccac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200  
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 <211> 135  
 <212> PRT  
 <213> Homo sapiens

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 Val Pro Gly Gly Arg Ser Lys Arg Asp Pro Asp Leu Tyr Gln  
 35 40 45  
 Leu Leu Gln Arg Leu Phe Lys Ser His Ser Ser Leu Glu Gly Leu  
 50 55 60  
 Leu Lys Ala Leu Ser Gln Ala Ser Thr Asp Pro Lys Glu Ser Thr  
 65 70 75  
 Ser Pro Glu Lys Arg Asp Met His Asp Phe Phe Val Gly Leu Met  
 80 85 90  
 Gly Lys Arg Ser Val Gln Pro Glu Gly Lys Thr Gly Pro Phe Leu  
 95 100 105  
 Pro Ser Val Arg Val Pro Arg Pro Leu His Pro Asn Gln Leu Gly  
 110 115 120



0966041-1

<213> Homo sapiens

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<210> 361  
 <211> 159  
 <212> PRT  
 <213> Homo sapiens

<400> 361  
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 Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser  
 35 40 45  
 Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu  
 50 55 60  
 Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser  
 65 70 75  
 Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp  
 80 85 90  
 His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser  
 95 100 105  
 Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val  
 110 115 120  
 Ser Ser Gly Arg Gly Gly Ser Arg Leu Cys Ser Val Leu Phe Val  
 125 130 135  
 Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln  
 140 145 150  
 Trp His Asn Arg His Ala Leu Lys Pro  
 155

<210> 362  
 <211> 422  
 <212> DNA  
 <213> Homo sapiens

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gcagctcaca tggaacaggg ccgggtatga ctttgcaact gaagctgaag 150  
gagtcctttc tgacaaatc ctcctatgag tccagcttcc tggaattgct 200  
tgaaaagctc tgcctcctcc tccatctccc ttcagggacc agcgctaccc 250  
tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagcca 300  
ttgaagcctg tgtcctctct ggcccgggct tttggggcgg ggatgcagga 350  
ggcaggcccc gacctgtct ttcagcaggc cccaccctc ctgagtggca 400  
ataaataaaa ttcggtatgc tg 422

<210> 363  
<211> 78  
<212> PRT  
<213> Homo sapiens

<400> 363  
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20 25 30  
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu  
35 40 45  
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly  
50 55 60  
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val  
65 70 75  
Cys Asn Thr

<210> 364  
<211> 826  
<212> DNA  
<213> Homo sapiens

<400> 364  
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aaggctcctg aaagccaatg gaaatacttt ttttttttct tggcactaat 450

caagtgaagt ttaccttttc acttagtagg atgtgttggt acgctagtaa 500  
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gctatcaaat attacttcat tcaatataaa taacaatagt agaagttggt 650  
tacttagata tgctttctag ttgcattttc tcagcctatg taagactact 700  
ttgttgtaat agcctttgaa atttacagta ctgtctctct actatcttca 750  
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accagaataa aagttcatat ctaccc 826

<210> 365  
<211> 67  
<212> PRT  
<213> Homo sapiens

<400> 365  
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20 25 30  
Phe Ser Val Glu Asn Glu Cys Leu Val Asp Leu Cys Leu Leu Arg  
35 40 45  
Ile Cys Tyr Lys Leu Ser Gly Val Pro Asn Gln Cys Arg Val Pro  
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Leu Pro Ser Asp Cys Ser Lys  
65

<210> 366  
<211> 2475  
<212> DNA  
<213> Homo sapiens

<400> 366  
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gttccttgca gcttttctgc ccccgccgca gtgtaccag gaccagcca 200  
tggtgcatta catctaccag cgctttcgag tcttgagca agggctggaa 250  
aaatgtaccc aagcaacgag ggcatacatt caagaattcc aagagttctc 300  
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acaagatgac agtgggtaac ttggcactga gagtgaacg tgccaacag 400  
gagattgact acatacaata ccttcgagag gctgacgagt gcatcgtatc 450  
agaggacaag acactggcag aaatgttgct ccaagaagct gaagaagaga 500

aaaagatccg gactctgctg aatgcaagct gtgacaacat gctgatgggc 550  
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 gatgaaagat gctgtctata actctccaaa ggtgtactta ttaattggat 650  
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 gataaacacca agccagctcc ccggaagcaa atcctaacac ttctctggca 750  
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 ccaggatgct gaagcctcat tctcttgtg tggggttctc tatgtggtct 1100  
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 cagttttcat gtctgcacaa gacctttcaa taggcctttc aaatgataat 2350  
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<210> 367  
 <211> 402  
 <212> PRT  
 <213> Homo sapiens

<400> 367  
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 Met Val His Tyr Ile Tyr Gln Arg Phe Arg Val Leu Glu Gln Gly  
 35 40 45  
 Leu Glu Lys Cys Thr Gln Ala Thr Arg Ala Tyr Ile Gln Glu Phe  
 50 55 60  
 Gln Glu Phe Ser Lys Asn Ile Ser Val Met Leu Gly Arg Cys Gln  
 65 70 75  
 Thr Tyr Thr Ser Glu Tyr Lys Ser Ala Val Gly Asn Leu Ala Leu  
 80 85 90  
 Arg Val Glu Arg Ala Gln Arg Glu Ile Asp Tyr Ile Gln Tyr Leu  
 95 100 105  
 Arg Glu Ala Asp Glu Cys Ile Val Ser Glu Asp Lys Thr Leu Ala  
 110 115 120  
 Glu Met Leu Leu Gln Glu Ala Glu Glu Glu Lys Lys Ile Arg Thr  
 125 130 135  
 Leu Leu Asn Ala Ser Cys Asp Asn Met Leu Met Gly Ile Lys Ser  
 140 145 150  
 Leu Lys Ile Val Lys Lys Met Met Asp Thr His Gly Ser Trp Met  
 155 160 165  
 Lys Asp Ala Val Tyr Asn Ser Pro Lys Val Tyr Leu Leu Ile Gly  
 170 175 180  
 Ser Arg Asn Asn Thr Val Trp Glu Phe Ala Asn Ile Arg Ala Phe  
 185 190 195  
 Met Glu Asp Asn Thr Lys Pro Ala Pro Arg Lys Gln Ile Leu Thr  
 200 205 210

Leu Ser Trp Gln Gly Thr Gly Gln Val Ile Tyr Lys Gly Phe Leu  
 215 225  
 Phe Phe His Asn Gln Ala Thr Ser Asn Glu Ile Ile Lys Tyr Asn  
 230 235 240  
 Leu Gln Lys Arg Thr Val Glu Asp Arg Met Leu Leu Pro Gly Gly  
 245 250 255  
 Val Gly Arg Ala Leu Val Tyr Gln His Ser Pro Ser Thr Tyr Ile  
 260 265 270  
 Asp Leu Ala Val Asp Glu His Gly Leu Trp Ala Ile His Ser Gly  
 275 280 285  
 Pro Gly Thr His Ser His Leu Val Leu Thr Lys Ile Glu Pro Gly  
 290 295 300  
 Thr Leu Gly Val Glu His Ser Trp Asp Thr Pro Cys Arg Ser Gln  
 305 310 315  
 Asp Ala Glu Ala Ser Phe Leu Leu Cys Gly Val Leu Tyr Val Val  
 320 325 330  
 Tyr Ser Thr Gly Gly Gln Gly Pro His Arg Ile Thr Cys Ile Tyr  
 335 340 345  
 Asp Pro Leu Gly Thr Ile Ser Glu Glu Asp Leu Pro Asn Leu Phe  
 350 355 360  
 Phe Pro Lys Arg Pro Arg Ser His Ser Met Ile His Tyr Asn Pro  
 365 370 375  
 Arg Asp Lys Gln Leu Tyr Ala Trp Asn Glu Gly Asn Gln Ile Ile  
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 Tyr Lys Leu Gln Thr Lys Arg Lys Leu Pro Leu Lys  
 395 400

<210> 368  
 <211> 2281  
 <212> DNA  
 <213> Homo sapiens

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 ctgacaaaac ttcgggatcc aagaagcaga aacaatatca gcggattcgg 250  
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 gtcatgaaa tggtaaaagt gggaaccagt gtgctttgaa accaaattag 2050



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<210> 369

<211> 447

<212> PRT

<213> Homo sapiens

<400> 369

Met	Glu	Leu	Ser	Gln	Met	Ser	Glu	Leu	Met	Gly	Leu	Ser	Val	Leu
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Leu	Gly	Leu	Leu	Ala	Leu	Met	Ala	Thr	Ala	Ala	Val	Ala	Arg	Gly
				20					25					30
Trp	Leu	Arg	Ala	Gly	Glu	Glu	Arg	Ser	Gly	Arg	Pro	Ala	Cys	Gln
				35					40					45
Lys	Ala	Asn	Gly	Phe	Pro	Pro	Asp	Lys	Ser	Ser	Gly	Ser	Lys	Lys
				50					55					60
Gln	Lys	Gln	Tyr	Gln	Arg	Ile	Arg	Lys	Glu	Lys	Pro	Gln	Gln	His
				65					70					75
Asn	Phe	Thr	His	Arg	Leu	Leu	Ala	Ala	Ala	Leu	Lys	Ser	His	Ser
				80					85					90
Gly	Asn	Ile	Ser	Cys	Met	Asp	Phe	Ser	Ser	Asn	Gly	Lys	Tyr	Leu
				95					100					105
Ala	Thr	Cys	Ala	Asp	Asp	Arg	Thr	Ile	Arg	Ile	Trp	Ser	Thr	Lys
				110					115					120
Asp	Phe	Leu	Gln	Arg	Glu	His	Arg	Ser	Met	Arg	Ala	Asn	Val	Glu
				125					130					135
Leu	Asp	His	Ala	Thr	Leu	Val	Arg	Phe	Ser	Pro	Asp	Cys	Arg	Ala
				140					145					150
Phe	Ile	Val	Trp	Leu	Ala	Asn	Gly	Asp	Thr	Leu	Arg	Val	Phe	Lys
				155					160					165
Met	Thr	Lys	Arg	Glu	Asp	Gly	Gly	Tyr	Thr	Phe	Thr	Ala	Thr	Pro
				170					175					180
Glu	Asp	Phe	Pro	Lys	Lys	His	Lys	Ala	Pro	Val	Ile	Asp	Ile	Gly
				185					190					195
Ile	Ala	Asn	Thr	Gly	Lys	Phe	Ile	Met	Thr	Ala	Ser	Ser	Asp	Thr
				200					205					210
Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile
				215					220					225
Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys
				230					235					240

Gly Arg Phe Val Ala Ser Cys Gly Phe Thr Pro Asp Val Lys Val  
 245 250 255  
 Trp Glu Val Cys Phe Gly Lys Lys Gly Glu Phe Gln Glu Val Val  
 260 265 270  
 Arg Ala Phe Glu Leu Lys Gly His Ser Ala Ala Val His Ser Phe  
 275 280 285  
 Ala Phe Ser Asn Asp Ser Arg Arg Met Ala Ser Val Ser Lys Asp  
 290 295 300  
 Gly Thr Trp Lys Leu Trp Asp Thr Asp Val Glu Tyr Lys Lys Lys  
 305 310 315  
 Gln Asp Pro Tyr Leu Leu Lys Thr Gly Arg Phe Glu Glu Ala Ala  
 320 325 330  
 Gly Ala Ala Pro Cys Arg Leu Ala Leu Ser Pro Asn Ala Gln Val  
 335 340 345  
 Leu Ala Leu Ala Ser Gly Ser Ser Ile His Leu Tyr Asn Thr Arg  
 350 355 360  
 Arg Gly Glu Lys Glu Glu Cys Phe Glu Arg Val His Gly Glu Cys  
 365 370 375  
 Ile Ala Asn Leu Ser Phe Asp Ile Thr Gly Arg Phe Leu Ala Ser  
 380 385 390  
 Cys Gly Asp Arg Ala Val Arg Leu Phe His Asn Thr Pro Gly His  
 395 400 405  
 Arg Ala Met Val Glu Glu Met Gln Gly His Leu Lys Arg Ala Ser  
 410 415 420  
 Asn Glu Ser Thr Arg Gln Arg Leu Gln Gln Gln Leu Thr Gln Ala  
 425 430 435  
 Gln Glu Thr Leu Lys Ser Leu Gly Ala Leu Lys Lys  
 440 445

<210> 370  
 <211> 1415  
 <212> DNA  
 <213> Homo sapiens

<400> 370  
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 ccacgcgagt ctcaatcatg ctctcctag taactgtgtc tgactgtgct 150  
 gtgatcacag gggcctgtga gcgggatgtc cagtgtgggg caggcacctg 200  
 ctgtgccatc agcctgtggc ttcgagggtc gcggatgtgc acccgcgtgg 250  
 ggcggaagcg cgaggagtgc caccocggca gccacaaggt ccccttcttc 300  
 aggaaacgca agcaccacac ctgtccttgc ttgcccaacc tgctgtgtc 350  
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atttttaggc gcttgctggt tctcaggata cccaccatcc ttttctgag 450  
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 ggtgggagca agggacaggg agcagggcag gggctgaaag gggcactgat 1350  
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 caccaactga aaaa 1415

<210> 371  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 371  
 Met Arg Gly Ala Thr Arg Val Ser Ile Met Leu Leu Val Thr  
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 Val Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val  
 20 25 30  
 Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg  
 35 40 45  
 Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys  
 50 55 60  
 His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys Arg Lys His  
 65 70 75

His Thr Cys Pro Cys Leu Pro Asn Leu Leu Cys Ser Arg Phe Pro  
80 85 90

Asp Gly Arg Tyr Arg Cys Ser Met Asp Leu Lys Asn Ile Asn Phe  
95 100 105

<210> 372

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 372

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cattgggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150  
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ttccagcctg ggtgactgag actctaacta a 1281

<210> 373  
 <211> 229  
 <212> PRT  
 <213> Homo sapiens

<400> 373

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Ser	Ile	Gly	Ala	Gly	Ala	Leu	Gly	Ala	Ala	Ala	Leu	Ala	Leu	Leu
				20					25					30
Leu	Ala	Asn	Thr	Asp	Val	Phe	Leu	Ser	Lys	Pro	Gln	Lys	Ala	Ala
				35					40					45
Leu	Glu	Tyr	Leu	Glu	Asp	Ile	Asp	Leu	Lys	Thr	Leu	Glu	Lys	Glu
				50					55					60
Pro	Arg	Thr	Phe	Lys	Ala	Lys	Glu	Leu	Trp	Glu	Lys	Asn	Gly	Ala
				65					70					75
Val	Ile	Met	Ala	Val	Arg	Arg	Pro	Gly	Cys	Phe	Leu	Cys	Arg	Glu
				80					85					90
Glu	Ala	Ala	Asp	Leu	Ser	Ser	Leu	Lys	Ser	Met	Leu	Asp	Gln	Leu
				95					100					105
Gly	Val	Pro	Leu	Tyr	Ala	Val	Val	Lys	Glu	His	Ile	Arg	Thr	Glu
				110					115					120
Val	Lys	Asp	Phe	Gln	Pro	Tyr	Phe	Lys	Gly	Glu	Ile	Phe	Leu	Asp
				125					130					135
Glu	Lys	Lys	Lys	Phe	Tyr	Gly	Pro	Gln	Arg	Arg	Lys	Met	Met	Phe
				140					145					150
Met	Gly	Phe	Ile	Arg	Leu	Gly	Val	Trp	Tyr	Asn	Phe	Phe	Arg	Ala
				155					160					165
Trp	Asn	Gly	Gly	Phe	Ser	Gly	Asn	Leu	Glu	Gly	Glu	Gly	Phe	Ile
				170					175					180
Leu	Gly	Gly	Val	Phe	Val	Val	Gly	Ser	Gly	Lys	Gln	Gly	Ile	Leu
				185					190					195
Leu	Glu	His	Arg	Glu	Lys	Glu	Phe	Gly	Asp	Lys	Val	Asn	Leu	Leu
				200					205					210
Ser	Val	Leu	Glu	Ala	Ala	Lys	Met	Ile	Lys	Pro	Gln	Thr	Leu	Ala
				215					220					225

Ser Glu Lys Lys

<210> 374  
 <211> 744  
 <212> DNA  
 <213> Homo sapiens

<400> 374

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<212> PRT  
<213> Homo sapiens

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35 40 45  
Ser Ser Ser Asp Gly Asn Leu Arg Pro Glu Ala Ile Thr Ala Ile  
50 55 60  
Ile Val Val Phe Ser Leu Leu Ala Ala Leu Leu Ala Val Gly  
65 70 75  
Leu Ala Leu Leu Val Arg Lys Leu Arg Glu Lys Arg Gln Thr Glu  
80 85 90  
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<210> 376  
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<212> DNA  
<213> Homo sapiens

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<212> PRT  
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Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr  
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Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu  
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<212> DNA  
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<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

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Lys	Arg	Pro	Lys	His	95	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val	105
Ala	Pro	Pro	Thr	Leu	110	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln	120
Phe	Thr	Glu	Cys	Gly	125	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro	135
Asp	Leu	Leu	Leu	Gly	140	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly	150
Lys	Leu	Phe	Val	His	155	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe	165
Asp	Glu	Tyr	Asn	Glu	170	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys	180
Lys	Ile	Glu	Ala	Thr	185	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn	195
Arg	Val	Tyr	Lys	Cys	200	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys	210
Arg	Ile	Asp	Ser	Thr	215	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe	225
Phe	Pro	Asp	Lys	Val	230	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met	240
Gln	Ser	Ile	Asp	Ser	245	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His	255
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Lys	His	Phe	Leu	Leu	335	Gln	Thr	Val	Glu	Asn	Gly	Ser	Trp	Val	Gly
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Tyr	Ser	Arg	Tyr		Phe 665	Thr	Ala	Tyr	Thr	Glu 670	Asn	Gly	Arg	Tyr	Ser 675
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Phe	Asp	Val	Gly		Lys 785	Val	Gln	Arg	Tyr	Ile 790	Ile	Arg	Ile	Ser	Ala 795
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&lt;211&gt; 3877

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 380

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 cttacctgtt taaataaacc aaagtatacc gtgtgaacca aacaatctct 3350  
 tttcaaaaac ggggtctctt cctggcttct ggcttccata agaagaaatg 3400  
 gagaanaata tatatatata tatatatatt gtgaaagatc aatccatctg 3450  
 ccagaatcta gtgggatgga agtttttgct acatgttacc caccocaggc 3500  
 cagggtggaag taactgaatt attttttaaa ttaagcagtt ctactcaatc 3550  
 accaagatgc ttctgaaaat tgcattttat taccatttca aactattttt 3600  
 taaaataaaa tacagttaac atagagtggg ttcttctatt atgtgaaaaa 3650  
 tattagccag caccagatgc atgagctaata tatctctttg agtccttgct 3700  
 tctgtttgct cacagtaaac tcattgttta aaagcttcaa gaacattcaa 3750  
 gctgtttggg tggtaaaaaa tgcattgtat tgattgttac tggtagttta 3800  
 tgaaatttta ttaaaacaca ggccatgaat ggaaggtggg attgcacagc 3850  
 taataaaaata tgatttggtg atatgaa 3877

<210> 381  
 <211> 532  
 <212> PRT  
 <213> Homo sapiens

<400> 381  
 Met Met Met Val Arg Arg Gly Leu Leu Ala Trp Ile Ser Arg Val  
 1 5 10 15  
 Val Val Leu Leu Val Leu Leu Cys Cys Ala Ile Ser Val Leu Tyr  
 20 25 30  
 Met Leu Ala Cys Thr Pro Lys Gly Asp Glu Glu Gln Leu Ala Leu  
 35 40 45  
 Pro Arg Ala Asn Ser Pro Thr Gly Lys Glu Gly Tyr Gln Ala Val  
 50 55 60  
 Leu Gln Glu Trp Glu Glu Gln His Arg Asn Tyr Val Ser Ser Leu  
 65 70 75  
 Lys Arg Gln Ile Ala Gln Leu Lys Glu Glu Leu Gln Glu Arg Ser  
 80 85 90

Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly	95	100	105
Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu	110	115	120
Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	125	130	135
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	140	145	150
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	155	160	165
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	170	175	180
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	185	190	195
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	200	205	210
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	215	220	225
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	230	235	240
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	245	250	255
Leu	Asn	Met	Ala	Asn	Thr	Leu	Ile	Asn	Val	Ile	Val	Pro	Leu	Ala	260	265	270
Lys	Arg	Val	Asp	Lys	Phe	Arg	Gln	Phe	Met	Gln	Asn	Phe	Arg	Glu	275	280	285
Met	Cys	Ile	Glu	Gln	Asp	Gly	Arg	Val	His	Leu	Thr	Val	Val	Tyr	290	295	300
Phe	Gly	Lys	Glu	Glu	Ile	Asn	Glu	Val	Lys	Gly	Ile	Leu	Glu	Asn	305	310	315
Thr	Ser	Lys	Ala	Ala	Asn	Phe	Arg	Asn	Phe	Thr	Phe	Ile	Gln	Leu	320	325	330
Asn	Gly	Glu	Phe	Ser	Arg	Gly	Lys	Gly	Leu	Asp	Val	Gly	Ala	Arg	335	340	345
Phe	Trp	Lys	Gly	Ser	Asn	Val	Leu	Leu	Phe	Phe	Cys	Asp	Val	Asp	350	355	360
Ile	Tyr	Phe	Thr	Ser	Glu	Phe	Leu	Asn	Thr	Cys	Arg	Leu	Asn	Thr	365	370	375
Gln	Pro	Gly	Lys	Lys	Val	Phe	Tyr	Pro	Val	Leu	Phe	Ser	Gln	Tyr	380	385	390
Asn	Pro	Gly	Ile	Ile	Tyr	Gly	His	His	Asp	Ala	Val	Pro	Pro	Leu	395	400	405



Glu Gln Gln Leu Val Ile Lys Lys Glu Thr Gly Phe Trp Arg Asp  
 410 415 420  
 Phe Gly Phe Gly Met Thr Cys Gln Tyr Arg Ser Asp Phe Ile Asn  
 425 430 435  
 Ile Gly Gly Phe Asp Leu Asp Ile Lys Gly Trp Gly Gly Glu Asp  
 440 445 450  
 Val His Leu Tyr Arg Lys Tyr Leu His Ser Asn Leu Ile Val Val  
 455 460 465  
 Arg Thr Pro Val Arg Gly Leu Phe His Leu Trp His Glu Lys Arg  
 470 475 480  
 Cys Met Asp Glu Leu Thr Pro Glu Gln Tyr Lys Met Cys Met Gln  
 485 490 495  
 Ser Lys Ala Met Asn Glu Ala Ser His Gly Gln Leu Gly Met Leu  
 500 505 510  
 Val Phe Arg His Glu Ile Glu Ala His Leu Arg Lys Gln Lys Gln  
 515 520 525  
 Lys Thr Ser Ser Lys Lys Thr  
 530

<210> 382  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 382  
 ctcggggaaa gggacttgat gttgg 25  
  
 <210> 383  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 383  
 gcgaagggtga gcctctatct cgtgcc 26  
  
 <210> 384  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 384  
 cagcctacac gtattgagg 19  
  
 <210> 385  
 <211> 48  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

cagtcagtagc aatcctggca taatatacgg ccaccatgat gcagtocc 48

<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

gaaagaatgt tgtggctgct cttttttctg gtgactgcc a ttcagtctga 50  
actctgtcaa ccagggtcag aaaatgcttt taaagtgaga cttagtatca 100  
gaacagctct gggagataaa gcatatgcct gggataccaa tgaagaatac 150  
ctcttcaaa gcatggtagc tttctccatg agaaaagttc ccaacagaga 200  
agcaacagaa atttcccatg tctactttg caatgtaacc cagaggggat 250  
cattctggtt tgtggttaca gacccttcaa aaaatcacac ctttctgct 300  
gttgagggtc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350  
cttctttcta aatgacaaa ctctggaatt tttaaaaatc ctttccacac 400  
ttgcaccacc catggaccca tctgtgccca tctggattat tatatttggt 450  
gtgatatttt gcatcatcat agttgcaatt gcactactga ttttatcagg 500  
gatctggcaa cgtagaagaa agaacaaaga accatctgaa gtggatgacg 550  
ctgaagataa gtgtgaaaac atgatacaca ttgaaaatgg catccccctc 600  
gatccccctg acatgaaggg gggcatatta atgatgcctt catgacagag 650  
gatgagaggc tcaccctct ctgaagggtt gttgttctgc ttcctcaaga 700  
aattaaacat ttgtttctgt gtgactgctg agcatcctga aataccaaga 750  
gcagatcata tttttgttt caccattctt cttttgtaat aaattttgaa 800  
tgtgtctgaa agtgaagaac aatcaattat acccaccaac accactgaaa 850  
tcataagcta ttacagactc aaaatattct aaaatatttt tctgacagta 900  
tagtgtataa atgtgggtcat gtggtatttg tagttattga ttttaagcatt 950  
tttagaataa agatcaggca tatgtatata ttttcacact tcaagagcct 1000  
aaggaaaaat aaattttcca gtggagaata catataatat ggtgtagaaa 1050  
tcattgaaaa tggatccttt ttgacgatca cttatatcac tctgtatatg 1100  
actaagtaaa caaaagttag aagtaattat tgtaaatgga tggataaaaa 1150  
tggaattact catatacagg gtggaatttt atcctgttat cacaccaaca 1200  
gttgattata tttttctga atatcagccc ctaataggac aattctattt 1250

gttgaccatt tctacaattt gtaaaagtcc aatctgtgct aacttaataa 1300  
agtaataatc atctcttttt aaaaaaaaaa aaaaaaaaaa aaaaaa 1346

<210> 387  
<211> 212  
<212> PRT  
<213> Homo sapiens

<400> 387  
Met Leu Trp Leu Leu Phe Phe Leu Val Thr Ala Ile His Ala Glu  
1 5 10 15  
Leu Cys Gln Pro Gly Ala Glu Asn Ala Phe Lys Val Arg Leu Ser  
20 25 30  
Ile Arg Thr Ala Leu Gly Asp Lys Ala Tyr Ala Trp Asp Thr Asn  
35 40 45  
Glu Glu Tyr Leu Phe Lys Ala Met Val Ala Phe Ser Met Arg Lys  
50 55 60  
Val Pro Asn Arg Glu Ala Thr Glu Ile Ser His Val Leu Leu Cys  
65 70 75  
Asn Val Thr Gln Arg Val Ser Phe Trp Phe Val Val Thr Asp Pro  
80 85 90  
Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala Ile  
95 100 105  
Arg Met Asn Lys Asn Arg Ile Asn Asn Ala Phe Phe Leu Asn Asp  
110 115 120  
Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro  
125 130 135  
Met Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile  
140 145 150  
Phe Cys Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly  
155 160 165  
Ile Trp Gln Arg Arg Arg Lys Asn Lys Glu Pro Ser Glu Val Asp  
170 175 180  
Asp Ala Glu Asp Lys Cys Glu Asn Met Ile Thr Ile Glu Asn Gly  
185 190 195  
Ile Pro Ser Asp Pro Leu Asp Met Lys Gly Gly Ile Leu Met Met  
200 205 210

Pro Ser

<210> 388  
<211> 1371  
<212> DNA  
<213> Homo sapiens

<400> 388  
aactcaaaact cctctctctg ggaacgcg gtgcttgctc ctcccgaggt 50



Ile Gln Leu Thr Ala Leu Trp Pro Ile Ala Ala Val Glu Ile Tyr 30  
 20  
 Thr Ser Arg Val Leu Glu Ala Val Asn Gly Thr Asp Ala Arg Leu 45  
 35  
 Lys Cys Thr Phe Ser Ser Phe Ala Pro Val Gly Asp Ala Leu Thr 60  
 50  
 Val Thr Trp Asn Phe Arg Pro Leu Asp Gly Gly Pro Glu Gln Phe 75  
 65  
 Val Phe Tyr Tyr His Ile Asp Pro Phe Gln Pro Met Ser Gly Arg 90  
 80  
 Phe Lys Asp Arg Val Ser Trp Asp Gly Asn Pro Glu Arg Tyr Asp 105  
 95  
 Ala Ser Ile Leu Leu Trp Lys Leu Gln Phe Asp Asp Asn Gly Thr 120  
 110  
 Tyr Thr Cys Gln Val Lys Asn Pro Pro Asp Val Asp Gly Val Ile 135  
 125  
 Gly Glu Ile Arg Leu Ser Val Val His Thr Val Arg Phe Ser Glu 150  
 140  
 Ile His Phe Leu Ala Leu Ala Ile Gly Ser Ala Cys Ala Leu Met 165  
 155  
 Ile Ile Ile Val Ile Val Val Val Leu Phe Gln His Tyr Arg Lys 180  
 170  
 Lys Arg Trp Ala Glu Arg Ala His Lys Val Val Glu Ile Lys Ser 195  
 185  
 Lys Glu Glu Glu Arg Leu Asn Gln Glu Lys Lys Val Ser Val Tyr 210  
 200  
 Leu Glu Asp Thr Asp 215  
 215

<210> 390  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 390  
 ccgaggccat ctaggagcca gagg 24

<210> 391  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 391  
 acaggcagag ccaatggcca gagg 24

<210> 392  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 392  
 gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393  
 <211> 471  
 <212> DNA  
 <213> Homo sapiens

<400> 393  
 gcatttttct ctgtgctccc tgatcttcag gtcaccacca tgaagttctt 50  
 agcagtcctg gtactcttgg gagtttccat cttcttggtc tctgcccaga 100  
 atccgacaac agctgctcca gctgacacgt atccagctac tggtoctgct 150  
 gatgatgaag cccctgatgc tgaaccact gctgctgcaa ccaactgagac 200  
 cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250  
 aagacattcc agttttaccc aaatgggttg gggatctccc gaatggtaga 300  
 gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350  
 tattcatgct tctgtgatt tcatccaact acttaccttg cctacgatat 400  
 cccctttatc tctaatcagt ttattttctt tcaataaaaa aataactatg 450  
 agcaacataa aaaaaaaaaa a 471

<210> 394  
 <211> 90  
 <212> PRT  
 <213> Homo sapiens

<400> 394  
 Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe  
 1 5 10 15  
 Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr  
 20 25 30  
 Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu  
 35 40 45  
 Thr Thr Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr  
 50 55 60  
 Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val  
 65 70 75  
 Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro  
 80 85 90

<210> 395  
 <211> 25

<212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Synthetic oligonucleotide probe

<400> 395  
 gtcacctgat cttcatgtca ccacc 25

<210> 396  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 396  
 cagggacaca ctctaccatt cgaggag 26

<210> 397  
 <211> 42  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 397  
 ccattcttct ggtctctgcc cagaatocga caacagctgc tc 42

<210> 398  
 <211> 907  
 <212> DNA  
 <213> Homo sapiens

<400> 398  
 ggactctgaa ggtccaagc agctgctgag gcccccaagg aagtgggttc 50  
 aaccttgagc cctaggggt ctggatttgc tggtaacaa gataacctga 100  
 gggcaggacc ccatagggga atgctacctc ctgcccttc acctgccctg 150  
 gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200  
 ggacgcagag gacgctcaca gactccagcc cttgttacc gagaggacac 250  
 ttggcaaggt ccagcgatgg tccggagtcc acacacagac tggcggcagg 300  
 gcaggagggg gacagtctct ttgtgcttgg ttggacagta agagggtctt 350  
 ggccagtcga ggggtggggg cggcaaaact cataaagaac cagagggtct 400  
 gggccccggc cacagagtca tctgcccagc tectctgctg ctggccagtg 450  
 ggagtggcac gaggtggggc tttgtgccag taaaaccaca ggctggattt 500  
 gcctcggggc catggtccct gtctagggca gcaattctca acctctctgc 550  
 tctcaggacc ccaaagagct ttcatgttat ctattgattt ttaccacatt 600  
 agcaattaaa actgagaaat gggccgggca cggtggctca cgcctgtaat 650

cccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700  
 caagaccagc ctggccaaca tggatgaaacc ttgtctacta aaaatacaaa 750  
 aaattagcca ggcacagtgg tgtgactgg tagtcccagt tactcgggag 800  
 gctgaggcag gaaaatcgct tgaaccagg aggcggagct tgcggtgagc 850  
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900  
 tcacaca 907

<210> 399  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 399  
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala  
 1 5 10 15  
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu  
 20 25 30  
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly  
 35 40 45  
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg  
 50 55 60  
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg  
 65 70 75  
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn  
 80 85 90  
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu  
 95 100 105  
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln  
 110 115 120

<210> 400  
 <211> 893  
 <212> DNA  
 <213> Homo sapiens

<400> 400  
 gtcatgccag tgcctgctct gtgcctgctc tgggccttgg caatggtgac 50  
 ccggcctgcc tcagcggccc ccatgggcgg ccagaaactg gcacagcatg 100  
 aggagctgac cctgctcttc catgggaccc tgcagctggg ccaggccctc 150  
 aacggtgtgt acaggaccac ggaggggacg ctgacaaagg ccaggaacag 200  
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250  
 ggggcccggga tgcagcccag gaacttcggg caagcctgtt ggagactcag 300  
 atggaggagg atattctgca gctgcaggca gagggcacag ctgaggtgct 350  
 gggggaggtg gcccaggcac agaaggtgct acgggacagc gtgcagcgcc 400



tagaagtcca gctgaggagc gcctggctgg gcctgccta cggagaattt 450  
 gaggtcttaa aggtctacgc tgacaagcag agccacatcc tatgggcct 500  
 cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550  
 ggctgcgaca gatccaggag agactccaca cagcggcgct ccagcctga 600  
 atctgcctgg atggaactga ggaccaatca tgctgcaagg aacacttcca 650  
 cgccccgtga gggccctgtg caggaggagg ctgcctgttc actgggatca 700  
 gccaggggcg cgggcccccac ttctgagcac agagcagaga cagacgcagg 750  
 cggggacaaa ggcagaggat gtagcccat tggggagggg tggagggaag 800  
 acatgtacc tttcatgcct acacaccct cattaaagca gagtctgtgc 850  
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401

<211> 198

<212> PRT

<213> Homo sapiens

<400> 401

Met	Pro	Val	Pro	Ala	Leu	Cys	Leu	Leu	Trp	Ala	Leu	Ala	Met	Val
1				5					10				15	
Thr	Arg	Pro	Ala	Ser	20	Ala	Ala	Pro	Met	Gly	Gly	Pro	Glu	Leu
										25				30
Gln	His	Glu	Glu	Leu	35	Thr	Leu	Leu	Phe	His	Gly	Thr	Leu	Gln
										40				45
Gly	Gln	Ala	Leu	Asn	50	Gly	Val	Tyr	Arg	Thr	Thr	Glu	Gly	Arg
										55				60
Thr	Lys	Ala	Arg	Asn	65	Ser	Leu	Gly	Leu	Tyr	Gly	Arg	Thr	Ile
										70				75
Leu	Leu	Gly	Gln	Glu	80	Val	Ser	Arg	Gly	Arg	Asp	Ala	Ala	Gln
										85				90
Leu	Arg	Ala	Ser	Leu	95	Leu	Glu	Thr	Gln	Met	Glu	Glu	Asp	Ile
										100				105
Gln	Leu	Gln	Ala	Glu	110	Ala	Thr	Ala	Glu	Val	Leu	Gly	Glu	Val
										115				120
Gln	Ala	Gln	Lys	Val	125	Leu	Arg	Asp	Ser	Val	Gln	Arg	Leu	Glu
										130				135
Gln	Leu	Arg	Ser	Ala	140	Trp	Leu	Gly	Pro	Ala	Tyr	Arg	Glu	Phe
										145				150
Val	Leu	Lys	Ala	His	155	Ala	Asp	Lys	Gln	Ser	His	Ile	Leu	Trp
										160				165
Leu	Thr	Gly	His	Val	170	Gln	Arg	Gln	Arg	Arg	Glu	Met	Val	Ala
										175				180
Gln	His	Arg	Leu	Arg		Gln	Ile	Gln	Glu	Arg	Leu	His	Thr	Ala

## Leu Pro Ala

<210> 402  
 <211> 1915  
 <212> DNA  
 <213> Homo sapiens

<400> 402  
 ggcaacatgg ctcagcaggc ttgccccaga gccatggcaa agaatggact 50  
 tgtaatttgc atcctgggtga tcaccttact cctggaccagc accaccagcc 100  
 acacatccag attaaaagcc aggaagcaca gcaaacgtcg agtgagagac 150  
 aaggatggag atctgaagac tcaaatgaa aagctctgga cagaagtcaa 200  
 tgccttgaag gaaattcaag ccctgcgac agctgtgtctc cgaggcacta 250  
 aagttcacaa gaaatgctac cttgtctcag aaggtttgaa gcatttccat 300  
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350  
 gaactccgac gaaatcaacg ccctccaaga ctatggtaaa aggagcctgc 400  
 caggtgtcaa tgacttttgg ctgggcatca atgacatggt cacggaaggc 450  
 aagtttgttg acgtcaacgg aatcgctatc tccttctcca actgggaccg 500  
 tgacacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550  
 cagctcaggg caagtggagt gatgaggcct gtgcgcagc caagagatag 600  
 atatgcgagt tcaccatccc taaataggtc ttctctcaat gtgtcctcca 650  
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700  
 aatcataatt ttactttatt aaaaaattgc aacacaagat caatgtccat 750  
 agcaatatga tagcatcagc caattttgct aacacatttc ttgggattt 800  
 tgcccttctt ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850  
 gataaaatgg cttctgctaa acagactaaa atctttctct ctagtctttc 900  
 toactgtgac aaaccagtt tgttttcaaa aaatcacagt agcaatgcaa 950  
 ctcatcactc tagaaaagca agcttaggct acctgaaaga ttttcccttg 1000  
 gaagtttagc gtatgtttga ctaacaaaaa ttccctacat cagagactct 1050  
 aggtgtcata taatocaaaa acttttcagc ctgttgtcca ttctgtccca 1100  
 tgctggcaat aataccttgt cagccatta cccttatttt gaattgtctc 1150  
 atctcctggt gggacttgta tcttgtctgc catatcagaa cacaaacccc 1200  
 tgaagagggt ctgatttgat tttttttttt tcttcatgcc tacccttttt 1250  
 ttggaagttt ccagccgcaa tttgaaatga aatgacaagg tgtatatattg 1300

atcaattttc attcccacca ttgcattaca acctctaact taaatgggta 1350  
 accctaaggc atatcaaaga agcagattgc atgataaaacg gaaatagaaa 1400  
 aaaagaacct acatttattt tgcttttagca tccttactct caccttttat 1450  
 gagattgaga gtggacttac atttcctttt ttacattttc gtatatattat 1500  
 tttttttagc catcattata tgtttaagtc tattatgggc aaccaatcct 1550  
 tggaagtga aaactgaatt taaagaatgc tatcttgaa aattgcatac 1600  
 gtctgtgcaa ttttttatto tgcctagtgc tattctgctt gtttaactag 1650  
 attgtacaaa ataacttcat tgcttaatat caaattacaa agtttagact 1700  
 tggaggggaaa tgggcttttt agaagcaaac aattttaaat atattttggt 1750  
 cttcaaataa atagtgttta aacattgaat gtgttttggt aacaatatcc 1800  
 cactttgcaa actttaacta cacatgcttg gaattaagtt ttagctgttt 1850  
 tcattgtctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900  
 aaaaaaaaaa aaaaa 1915

<210> 403  
 <211> 206  
 <212> PRT  
 <213> Homo sapiens

<400> 403  
 Met Ala Gln Gln Ala Cys Pro Arg Ala Met Ala Lys Asn Gly Leu  
 1 5 10 15  
 Val Ile Cys Ile Leu Val Ile Thr Leu Leu Asp Gln Thr Thr  
 20 25 30  
 Ser His Thr Ser Arg Leu Lys Ala Arg Lys His Ser Lys Arg Arg  
 35 40 45  
 Val Arg Asp Lys Asp Gly Asp Leu Lys Thr Gln Ile Glu Lys Leu  
 50 55 60  
 Trp Thr Glu Val Asn Ala Leu Lys Glu Ile Gln Ala Leu Gln Thr  
 65 70 75  
 Val Cys Leu Arg Gly Thr Lys Val His Lys Lys Cys Tyr Leu Ala  
 80 85 90  
 Ser Glu Gly Leu Lys His Phe His Glu Ala Asn Glu Asp Cys Ile  
 95 100 105  
 Ser Lys Gly Gly Ile Leu Val Ile Pro Arg Asn Ser Asp Glu Ile  
 110 115 120  
 Asn Ala Leu Gln Asp Tyr Gly Lys Arg Ser Leu Pro Gly Val Asn  
 125 130 135  
 Asp Phe Trp Leu Gly Ile Asn Asp Met Val Thr Glu Gly Lys Phe  
 140 145 150  
 Val Asp Val Asn Gly Ile Ala Ile Ser Phe Leu Asn Trp Asp Arg



ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400  
ctggagcatc tacacctgag gacaagacgc tgcccacccg cgagggtcta 450  
aaaccccgcc gcggggagga ccgtccatcc ccttccccgc gcccctctca 500  
ataaacgtgg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550  
aaaaaaaaaa aaaaaaaaaa 570

<210> 408  
<211> 104  
<212> PRT  
<213> Homo sapiens

<400> 408  
Met Lys Leu Ala Ala Leu Leu Gly Leu Cys Val Ala Leu Ser Cys  
1 5 10 15  
Ser Ser Ala Ala Ala Phe Leu Val Gly Ser Ala Lys Pro Val Ala  
20 25 30  
Gln Pro Val Ala Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly  
35 40 45  
Thr Leu Ala Asn Pro Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu  
50 55 60  
Leu Ser Ser Leu Gly Ile Pro Val Asn His Leu Ile Glu Gly Ser  
65 70 75  
Gln Lys Cys Val Ala Glu Leu Gly Pro Gln Ala Val Gly Ala Val  
80 85 90  
Lys Ala Leu Lys Ala Leu Leu Gly Ala Leu Thr Val Phe Gly  
95 100

<210> 409  
<211> 2089  
<212> DNA  
<213> Homo sapiens

<400> 409  
tgaaggactt ttccaggacc caaggccaca cactggaagt cttgcagctg 50  
aaggaggcca ctcccttgcc tcgcagccg atcacatgaa ggtggtgcca 100  
agtctcctgc tctccgtcct cctggcacag gtgtggcttg taccggctt 150  
ggccccagct cctcagtcgc cagagacccc agccccctag aaccagacca 200  
gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250  
agcggaggaga aggccgtga ggaagagaaa gcctggctga tggccagcag 300  
gcagcagctt gccaaaggaga cttcaaaact cggtattcag ctgctgcgaa 350  
agatctccat gaggcacgat ggcaacatgg tttctctccc atttgcatg 400  
tccttggcca tgacaggctt gatgctgggg gccacagggc cgactgaaac 450  
ccagatcaag agagggtccc acttgaggc cctgaagccc accaagcccc 500



<210> 410  
 <211> 444  
 <212> PRT  
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln	15
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Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu	30
				20					25						
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro	45
				35					40						
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala	60
				50					55						
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu	75
				65					70						
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile	90
				80					85						
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met	105
				95					100						
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr	120
				110					115						
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro	135
				125					130						
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu	150
				140					145						
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe	165
				155					160						
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn	180
				170					175						
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe	195
				185					190						
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn	210
				200					205						
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Lys	Phe	Asp	Glu	Ile	Asn	225
				215					220						
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly	240
				230					235						
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr	255
				245					250						
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr	270
				260					265						
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys	285
				275					280						

His Val Leu Lys Leu Pro Tyr Gln Gly Asn Ala Thr Met Leu Val  
 290 295 300  
 Val Leu Met Glu Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr  
 305 310 315  
 Leu Thr Thr Asp Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr  
 320 325 330  
 Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys  
 335 340 345  
 Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile  
 350 355 360  
 Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg  
 365 370 375  
 Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val  
 380 385 390  
 Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile  
 395 400 405  
 Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe  
 410 415 420  
 His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu  
 425 430 435  
 Gly Arg Val Val Asn Pro Thr Leu Leu  
 440

<210> 411  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<400> 411  
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 cccagacatg aggaggctcc tccctggcac cagcctggtg gttgtgctgc 100  
 tgtggggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150  
 gtcaaacact ggccctcaga gcaggaccca gagaaggcct gggggcggcc 200  
 tgtgtgtggag cctccggaga aggacgacca gctggtggtg ctgttccctg 250  
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300  
 agggggcccca tccctccagg caccaaggcc tggatggaga ccgaggacac 350  
 cctggggcctg gtccctgagtc ccgagcccca ccatgacacg ctgtaccacc 400  
 ctccgcctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450  
 ccaaatcacc aggtgctcct gggaccggag gaagaccaag accacatcta 500  
 ccacccccag tagggctcca ggggccatca ctgccccgc cctgtcccaa 550  
 ggcccaggct gttgggactg ggaccctccc tacctgccc cagctagaca 600



aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412

<211> 151

<212> PRT

<213> Homo sapiens

<400> 412

Met Arg Arg Leu Leu Val Thr Ser Leu Val Val Val Leu Leu  
1 5 10 15

Trp Glu Ala Gly Ala Val Pro Ala Pro Lys Val Pro Ile Lys Met  
20 25 30

Gln Val Lys His Trp Pro Ser Glu Gln Asp Pro Glu Lys Ala Trp  
35 40 45

Gly Ala Arg Val Val Glu Pro Pro Glu Lys Asp Asp Gln Leu Val  
50 55 60

Val Leu Phe Pro Val Gln Lys Pro Lys Leu Leu Thr Thr Glu Glu  
65 70 75

Lys Pro Arg Gly Gln Gly Arg Gly Pro Ile Leu Pro Gly Thr Lys  
80 85 90

Ala Trp Met Glu Thr Glu Asp Thr Leu Gly Arg Val Leu Ser Pro  
95 100 105

Glu Pro Asp His Asp Ser Leu Tyr His Pro Pro Pro Glu Glu Asp  
110 115 120

Gln Gly Glu Glu Arg Pro Arg Leu Trp Val Met Pro Asn His Gln  
125 130 135

Val Leu Leu Gly Pro Glu Glu Asp Gln Asp His Ile Tyr His Pro  
140 145 150

Gln

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

agaaagctgc actctgttga gctccagggc gcagtgagg gagggagtga 50

aggagctctc tgtaccaag gaaagtgcag ctgagactca gacaagatta 100

caatgaacca actcagcttc ctgctgttcc tcatagcgac caccagagga 150

tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200

gtctccatct ctgccagaa gctgcaagga aatcaaagac gaatgtccta 250

gtgcatttga tggcctgtat ttctccgca ctgagaatgg tggtatctac 300

cagacctctt gtgacatgac ctctgggggt ggcggtctga ccctggtggc 350

cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcatcgct 400



	125	130	135
Asn Pro Gly Tyr	Tyr Asp Ile Gln Ala	Lys Asp Leu Gly Ile	Trp
	140	145	150
His Val Pro Asn	Lys Ser Pro Met Gln	His Trp Arg Asn Ser	Ser
	155	160	165
Leu Leu Arg Tyr	Arg Thr Asp Thr Gly	Phe Leu Gln Thr Leu	Gly
	170	175	180
His Asn Leu Phe	Gly Ile Tyr Gln Lys	Tyr Pro Val Lys Tyr	Gly
	185	190	195
Glu Gly Lys Cys	Trp Thr Asp Asn Gly	Pro Val Ile Pro Val	Val
	200	205	210
Tyr Asp Phe Gly	Asp Ala Gln Lys Thr	Ala Ser Tyr Tyr Ser	Pro
	215	220	225
Tyr Gly Gln Arg	Glu Phe Thr Ala Gly	Phe Val Gln Phe Arg	Val
	230	235	240
Phe Asn Asn Glu	Arg Ala Ala Asn Ala	Leu Cys Ala Gly Met	Arg
	245	250	255
Val Thr Gly Cys	Asn Thr Glu His His	Cys Ile Gly Gly Gly	Gly
	260	265	270
Tyr Phe Pro Glu	Ala Ser Pro Gln Gln	Cys Gly Asp Phe Ser	Gly
	275	280	285
Phe Asp Trp Ser	Gly Tyr Gly Thr His	Val Gly Tyr Ser Ser	Ser
	290	295	300
Arg Glu Ile Thr	Glu Ala Ala Val Leu	Leu Phe Tyr Arg	
	305	310	

<210> 415  
 <211> 1281  
 <212> DNA  
 <213> Homo sapiens

<400> 415  
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 cggctgggag cccacgaggc tgccgcaccc tgccctcggg acaatgggac 100  
 tcggcgcgcg aggtgcttgg gccgcgctgc tccctggggac gctgcaggtg 150  
 cttagcgctgc tgggggcccgc ccatgaaagc gcagccatgg cggcatctgc 200  
 aaacatagag aattctgggc ttccacacaa ctccagtgcct aactcaacag 250  
 agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300  
 actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350  
 caccaccatg aaacctacag cggcatctaa tacaacaaca ccagggatgg 400  
 tctcaacaaa tatgacttct accaccttaa agtctacacc caaacaaca 450  
 agtgtttcac agaacacatc tcagatatca acatccacaa tgaccgtaac 500

ccacaatagt tcaagtacat ctgctgcttc atcagtaaca atcacaacaa 550  
 ctagtcattc tgaagcaaag aaaggatcaa aatttgatag tgggagcttt 600  
 gttggtggta ttgtattaac gctgggagtt ttatctattc ttacattgg 650  
 atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700  
 aacatgatgc catcatttaa ggaaatccat ggaccaagga tggaatacag 750  
 attgatgctg cccatcaat taattttggt ttattaatag tttaaaacaa 800  
 tattctcttt ttgaaaatag tataaacagg ccatgcatat aatgtacagt 850  
 gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900  
 tgaaataaac atctggatct tatagaccgt tcatacaatg gttttagcaa 950  
 gttcatagta agacaaacaa gtcctatctt tttttttggt ctgggggtggg 1000  
 ggcattgggc acatatgacc agtaattgaa agacgtcatc actgaaagac 1050  
 agaatgccat ctgggcatac aaataagaag tttgtcacag cactcaggat 1100  
 tttgggtatc tttttagtct cacataaaga acttcagtc ttttcagagc 1150  
 tggatatatc ttaattacta atgccacaca gaaattatag aatcaaaacta 1200  
 gatctgaagc ataatttaag aaaaacatca acattttttg tgctttaaac 1250  
 tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416  
 <211> 208  
 <212> PRT  
 <213> Homo sapiens

<400> 416  
 Met Gly Leu Gly Ala Arg Gly Ala Trp Ala Ala Leu Leu Leu Gly  
 1 5 10 15  
 Thr Leu Gln Val Leu Ala Leu Leu Gly Ala Ala His Glu Ser Ala  
 20 25 30  
 Ala Met Ala Ala Ser Ala Asn Ile Glu Asn Ser Gly Leu Pro His  
 35 40 45  
 Asn Ser Ser Ala Asn Ser Thr Glu Thr Leu Gln His Val Pro Ser  
 50 55 60  
 Asp His Thr Asn Glu Thr Ser Asn Ser Thr Val Lys Pro Pro Thr  
 65 70 75  
 Ser Val Ala Ser Asp Ser Ser Asn Thr Thr Val Thr Thr Met Lys  
 80 85 90  
 Pro Thr Ala Ala Ser Asn Thr Thr Thr Pro Gly Met Val Ser Thr  
 95 100 105  
 Asn Met Thr Ser Thr Thr Leu Lys Ser Thr Pro Lys Thr Thr Ser  
 110 115 120  
 Val Ser Gln Asn Thr Ser Gln Ile Ser Ser Thr Met Thr Val

125	130	135
Thr His Asn Ser Ser Val Thr Ser Ala Ala Ser Ser Val Thr Ile		
140	145	150
Thr Thr Thr Met His Ser Glu Ala Lys Lys Gly Ser Lys Phe Asp		
155	160	165
Thr Gly Ser Phe Val Gly Gly Ile Val Leu Thr Leu Gly Val Leu		
170	175	180
Ser Ile Leu Tyr Ile Gly Cys Lys Met Tyr Tyr Ser Arg Arg Gly		
185	190	195
Ile Arg Tyr Arg Thr Ile Asp Glu His Asp Ala Ile Ile		
200	205	

<210> 417  
 <211> 1728  
 <212> DNA  
 <213> Homo sapiens

<400> 417  
 cagccgggtc ccaagcctgt gcctgagcct gagcctgagc ctgagccoga 50  
 gccggggacc ggtcgcgggg gctccgggct gtgggaccgc tgggccccca 100  
 gcgatggcga cctgtgggg aggcttctt cggttggtc cttgctcag 150  
 cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgag ctgtcagacg 200  
 ccgccaagaa ttctgaggat gtcagatgta aatgtatctt cctccctat 250  
 aaagaaaatt ctgggcataat ttataataag aacatatctc agaaagattg 300  
 tgattgcctt catgttgtg agcccatgcc tgtcggggg cctgatgtag 350  
 aagcatactg tctacgtgt gaatgcaaat atgaagaaag aagctctgtc 400  
 acaatcaagg ttaccattat aatttatctc tccattttgg gccttctact 450  
 tctgtacatg gtatatctta ctctggttga gcccatactg aagaggcgcc 500  
 tctttggaca tgcacagttg atacagagtg atgatgatat tggggatcac 550  
 cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtcgagc 600  
 caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650  
 tccaagagca gcaaaagtct gtctttgacc ggcattgtgt cctcagctaa 700  
 ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750  
 agaactgact gggttttgct gggtttcatt ttaataacct gttgatttca 800  
 ccaactgttg ttggaagatt caaaactgga agcaaaaaat tgcttgattt 850  
 ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900  
 aaagtcagcc aataagtcct ttccctatttg tgacttttac taataaaaaa 950  
 aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt tcaagataat ttccagggtt 1050  
 ttgtgtgttg ttgttttttg ttgtttgtt ttggtgggag aggggaggga 1100  
 tgccctgggaa gtggttaaca acttttttca agtcacttta ctaaacaaac 1150  
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 agtgtagcca gcctcatcaa agagctgact tactcatttg acttttgcac 1250  
 tgactgtatt atctgggtat ctgctgtgtc tgcacttcat ggtaaacggg 1300  
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 tgtgatgtct gatgcaatgc atcctagaac aaactggcca ttgtctagtt 1400  
 tactctaaag actaaacata gtcttggtgt gtgtgggtct actcatcttc 1450  
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 attttatttt aaaccaagc ctccctggat tgataatata tacacatttg 1550  
 tcagcatttc cggctgtgtt gagaggcagc tgtttgagct ccaatatgtg 1600  
 cagctttgaa ctagggtctg ggttgtgggt gcctctcttg aaaggtctaa 1650  
 ccattatttg ataactggct tttttcttcc tatgtctctt ttggaatgta 1700  
 acaataaaaa taatttttga aacatcaa 1728

<210> 418  
 <211> 198  
 <212> PRT  
 <213> Homo sapiens

<400> 418  
 Met Ala Thr Leu Trp Gly Gly Leu Leu Arg Leu Gly Ser Leu Leu  
 1 5 10 15  
 Ser Leu Ser Cys Leu Ala Leu Ser Val Leu Leu Leu Ala Gln Leu  
 20 25 30  
 Ser Asp Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile  
 35 40 45  
 Cys Pro Pro Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn  
 50 55 60  
 Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val Val Glu Pro Met  
 65 70 75  
 Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu  
 80 85 90  
 Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val Thr Ile  
 95 100 105  
 Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Tyr Met Val  
 110 115 120  
 Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gln  
 125 130 135

His Ala Gln Leu Ile Gln Ser Asp Asp Asp Ile Gly Asp His Gln  
 140 145 150

Pro Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg  
 155 160 165

Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys  
 170 175 180

Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val  
 185 190 195

Val Leu Ser

<210> 419  
 <211> 681  
 <212> DNA  
 <213> Homo sapiens

<400> 419  
 gcacctgcga ccacccgtgag cagtcctggc gtactccaca gtgcagagag 50  
 tcgctctggc ttctgggctt gtctctggct tgctgctgct gctgcccaag 100  
 gccttctctgt cccgcgggaa gcgcgaggag ccgcccgga cacctgaagg 150  
 aaaattgggc cgattttccac ctatgatgca tcataccagg gcacctcag 200  
 atggccagac tctctgggct cgtttccaga ggtctcacct tgccgaggca 250  
 ttgcaaagg ccaaaggatc aggtggagggt gctggaggag gaggtagtgg 300  
 aagagggtct atggggcaga ttattccaat ctacggtttt gggatttttt 350  
 tatatatact gtacattcta ttaaggtaa gtagaatcat cctaatacata 400  
 ttacatcaat gaaaatctaa tatggcgata aaaatcattg tctacattaa 450  
 aaactcttat agttcataaa attatttcaa atccatcatc tctttaaatc 500  
 ctgcctcttc ttcattgagt acttaggata gccattattt cagtttcaca 550  
 taagaatggt tactcaatgt ttaagtgttt tgcccaaaaa ttcacaacta 600  
 acaaggcaga actaggactt gaacatggat cttttggttc ttaatocagt 650  
 gagtgtatata attcaatgca ctcccctgcc a 681

<210> 420  
 <211> 128  
 <212> PRT  
 <213> Homo sapiens

<400> 420  
 Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu  
 1 5 10 15

Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg  
 20 25 30

Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly  
 35 40 45

Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly  
50 55 60

Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala  
65 70 75

Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly  
80 85 90

Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe  
95 100 105

Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg  
110 115 120

Ile Ile Leu Ile Ile Leu His Gln  
125

<210> 421  
<211> 1630  
<212> DNA  
<213> Homo sapiens

<400> 421  
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gctcttcac ttgatttga aagttgagag cagcatgttt tgccactga 100  
aactcatcct gctgccagt ttactggatt attccttggg cctgaatgac 150  
ttgaatgttt cccgcctga gctaacagtc catgtgggtg attcagctct 200  
gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250  
actggactct gtcaccagga gagcagcca aggacgaata tgtgtctac 300  
tattactcca atctcagtgt gcctattggg cgttccaga acgcgtaca 350  
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400  
tgcaagaggc tgaccagga acctatatct gtgaaatccg cctcaaagg 450  
gagagccagg tgttcaagaa ggcgggtgta ctgcatgtgc ttccagagga 500  
gcccagaag etcatgggtcc atgtgggtg attgattcag atgggatgtg 550  
ttttccagag cacagaagt aaacacgtga ccaaggtaga atggatat 600  
tcaggacggc ggcgaagga ggagattgta ttctgttact accacaaact 650  
caggatgtct gtggagtact cccagagctg gggccacttc cagaatcgtg 700  
tgaacctggt gggggacatt ttccgcaatg acggttccat catgcttcaa 750  
ggagtggagg agtcagatgg aggaactac acctgcagta tccacctagg 800  
gaacctgggt ttcaagaaaa ccattgtgct gcatgtcagc ccggaagagc 850  
ctcgaaact ggtgaccccg gcagccctga ggcctctggt ctgggtggt 900  
aatcagttg tgatcattgt gggaattgtc tgtgccacaa tcctgctgct 950  
ccctgttctg atattgatcg tgaagaagac ctgtggaat aagagttcag 1000



tgaattctac agtcttggtg aagaacacga agaagactaa tccagagata 1050  
 aaagaaaaac cctgccattt tgaagatgt gaaggggaga aacacattta 1100  
 ctccccaaata attgtacggg aggtgatcga ggaagaagaa ccaagtga 1150  
 aatcagaggc cacctacatg accatgcacc cagtttgccc ttctctgagg 1200  
 tcagatcgga acaactcact tgaaaaaaag tcaggtgggg gaatgccaaa 1250  
 aacacagcaa gccttttgag aagaatggag agtccctca tctcagcagc 1300  
 ggtggagact ctctcctgtg tgtgtcctgg gccactctac cagtgatttc 1350  
 agactccgc tctccagct gtctcctgt ctcattgtt ggtcaatata 1400  
 ctgaagatgg agaatttga gcctggcaga gagactggac agctctggag 1450  
 gaacaggcct gctgagggga ggggagcatg gacttggcct ctggagtggg 1500  
 acactggccc tgggaaccag gctgagctga gtggcctcaa accccccgtt 1550  
 ggatcagacc ctctgtggg cagggttctt agtggatgag ttactgggaa 1600  
 gaatcagaga taaaaccaa cccaaatcaa 1630

<210> 422  
 <211> 394  
 <212> PRT  
 <213> Homo sapiens

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 Lys Gly Glu Ser Gln Val Phe Lys Lys Ala Val Val Leu His Val  
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 Leu Pro Glu Glu Pro Lys Glu Leu Met Val His Val Gly Gly Leu  
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 Ile Gln Met Gly Cys Val Phe Gln Ser Thr Glu Val Lys His Val



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 Val Gly Leu Val Ala Leu Gly Ile Trp Ser Val Met Gln Arg Asn  
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 Tyr Leu Gln Asp Glu Asn Glu Asn Arg Thr Gly Thr Leu Gln Gln  
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 80 85 90  
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 Trp Arg Tyr Tyr Gly Asp Ser Cys Tyr Gly Phe Phe Arg His Asn  
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80 85 90  
Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile  
95 100 105  
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110 115 120  
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125 130 135  
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140 145 150  
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Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met  
170 175 180  
Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu  
185 190 195  
Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His  
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Arg Glu Pro Gly Gly Ser Arg Pro Val Ser Ala Gln Arg Arg Val  
20 25 30  
Cys Pro Arg Gly Thr Lys Ser Leu Cys Gln Lys Gln Leu Leu Ile  
35 40 45  
Leu Leu Ser Lys Val Arg Leu Cys Gly Gly Arg Pro Ala Arg Pro  
50 55 60  
Asp Arg Gly Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu  
65 70 75  
Phe Cys Arg Gln Gly Phe Tyr Leu Gln Ala Asn Pro Asp Gly Ser  
80 85 90  
Ile Gln Gly Thr Pro Glu Asp Thr Ser Ser Phe Thr His Phe Asn  
95 100 105  
Leu Ile Pro Val Gly Leu Arg Val Val Thr Ile Gln Ser Ala Lys  
110 115 120  
Leu Gly His Tyr Met Ala Met Asn Ala Glu Gly Leu Leu Tyr Ser  
125 130 135  
Ser Pro His Phe Thr Ala Glu Cys Arg Phe Lys Glu Cys Val Phe  
140 145 150  
Glu Asn Tyr Tyr Val Leu Tyr Ala Ser Ala Leu Tyr Arg Gln Arg  
155 160 165  
Arg Ser Gly Arg Ala Trp Tyr Leu Gly Leu Asp Lys Glu Gly Gln  
170 175 180  
Val Met Lys Gly Asn Arg Val Lys Lys Thr Lys Ala Ala Ala His  
185 190 195  
Phe Leu Pro Lys Leu Leu Glu Val Ala Met Tyr Gln Glu Pro Ser  
200 205 210  
Leu His Ser Val Pro Glu Ala Ser Pro Ser Ser Pro Pro Ala Pro  
215 220 225

<210> 498  
<211> 744

<212> DNA  
<213> Homo Sapien

<400> 498  
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ggagcagcac tgggaccgac cgtctgccag caggaggcgg agcagcccca 100  
gcaagaaccg cgggctctgc aacggcaacc tgggtgatat ctcttccaaa 150  
gtgcgcatct tcggcctcaa gaagcgagg ttgcggcgcc aagatcccca 200  
gctcaagggt atagtaccca ggttatattg caggcaagcg tactacttgc 250  
aaatgcaccc cgatggagct ctcgatggaa ccaaggatga cagcactaat 300  
tctacactct tcaacctcat accagtggga ctacgtgttg ttgccatcca 350  
gggagtgaac acaggggttg atatacccat gaatggagaa ggttacctct 400  
acctatcaga actttttacc cctgaatgca agtttaaaga atctgttttt 450  
gaaaattatt atgtaatcta ctcatccatg ttgtacagac aacaggaatc 500  
tggtagagcc tggtttttgg gattaaataa ggaaggcgaa gctatgaaag 550  
ggaacagagt aaagaaaacc aaaccagcag ctcattttct acccaagcca 600  
ttggaagtgt ccatgtaccg agaaccatct ttgcatgatg ttggggaaac 650  
ggtcccgaag cctgggggtga cgccaagtaa aagcacaagt gcgtctgcaa 700  
taatgaatgg agggcaacca gtcaacaaga gtaagacaac atag 744

<210> 499  
<211> 247  
<212> PRT  
<213> Homo Sapien

<400> 499  
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1 5 10  
Ala Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg 30  
20 25  
Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val 45  
35 40  
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg 60  
50 55  
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu 75  
65 70  
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala 90  
80 85  
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn 105  
95 100  
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys 120  
110 115

Thr Gly Leu Tyr Ile Ala Met Asn Gly Glu Gly Tyr Leu Tyr Pro  
 125 130  
 Ser Glu Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe  
 140 145 150  
 Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met Leu Tyr Arg Gln Gln  
 155 160 165  
 Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn Lys Glu Gly Gln  
 170 175 180  
 Ala Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro Ala Ala His  
 185 190 195  
 Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu Pro Ser  
 200 205 210  
 Leu His Asp Val Gly Glu Thr Val Pro Lys Pro Gly Val Thr Pro  
 215 220 225  
 Ser Lys Ser Thr Ser Ala Ser Ala Ile Met Asn Gly Gly Lys Pro  
 230 235 240  
 Val Asn Lys Ser Lys Thr Thr  
 245

<210> 500  
 <211> 2906  
 <212> DNA  
 <213> Homo Sapien

<400> 500  
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 ggctgttggg tgcccttgcaa aaatgaagga tgcaggacgc agctttctcc 100  
 tggaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150  
 gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200  
 acacagggag cattcaagaa tgaataaac cagagttaga cccgcggggg 250  
 ttggtgtggt ctgacataaa taaataatct taaagcagct gttccctcc 300  
 ccaccccaa aaaaaaggat gattggaaat gaagaaccga ggattcaca 350  
 agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400  
 gatatttttg gaatgaaaag ttgggggctt ttttagtaaa gtaagaact 450  
 ggtgtggtgg tgttttcctt tctttttgaa tttccacaa gaggagagga 500  
 aattaataat acatctgcaa agaaatttca gagaagaaaa gttgaccgcg 550  
 gcagattgag gcattgattg ggggagagaa accagcagag cacagtgtga 600  
 tttgtgccta tgttgactaa aattgacgga taattgcagt tggatttttc 650  
 ttcatacaac tccttttttt taaattttta ttccttttgg tatcaagatc 700  
 atgcgttttc tctgttctt aaccacctgg atttccatct ggatgttgct 750

gtgatcagtc tgaaatacaa ctgtttgaat tccagaagga ccaacaccag 800  
ataaattatg aatgttgaac aagatgacct tacatccaca gcagataatg 850  
ataggtccta ggtttaacag ggccctattt gacccccctgc ttgtggtgct 900  
gctggtctct caactctctg ttgtggtcgg tctggtgcgg gctcagacct 950  
gcccttctgt gtgctcctgc agcaaccagt tcagcaaggt gatttgtgtt 1000  
cggaaaaacc tgcgtgaggt tccggatggc atctccacca acacacggct 1050  
gctgaacctc catgagaacc aaatccagat catcaaagtg aacagcttca 1100  
agcaacttgag gcaactggaa atctacagt tgagtaggaa ccatatcaga 1150  
accattgaaa ttggggcttt caatggtctg gcgaacctca acactctgga 1200  
actctttgac aatcgtctta ctaccatccc gaatggagct ttgtatact 1250  
tgtctaaact gaaggagctc tgggtgcgaa acaaccccat tgaaagcatc 1300  
cttcttatg cttttaacag aattccttct ttgcgcgag tagacttagg 1350  
ggaattgaaa agactttcat acatctcaga agtgccctt gaaggtctgt 1400  
ccaacttgag gtatttgaac cttgccatgt gcaaccttcg ggaaatccct 1450  
aacctcacac cgctcataaa actagatgag ctggatcttt ctgggaatca 1500  
tttatctgcc atcaggcctg gctctttcca gggtttgat caccttcaaa 1550  
aactgtggat gatacagtc cagattcaag tgattgaacg gaatgccttt 1600  
gacaaccttc agtcaactgt ggagatcaac ctggcacaca ataactaac 1650  
attactgcct catgacctct tcaactccct gcacatctca gagcggatca 1700  
atttacatca caacccttg aactgtaact gtgacatact gtggctcagc 1750  
tggtggataa aagacatggc ccctcgaac acagcttgtt gtgcccggtg 1800  
taacactcct cccaactaa aggggaggtc cattggagag ctgcaccaga 1850  
attaactcac atgctatgct ccggtgattg tggagcccc tcagacctc 1900  
aatgtcactg aaggcatggc agctgagctg aaatgtcggg cctccacatc 1950  
cctgacatct gtatcttgga ttaactccaa tggacagctc atgacacatg 2000  
ggcgctacaa agtgcggata gctgtgctca gtgatggatc gttaaattc 2050  
acaaatgtaa ctgtgcaaga tacaggcatg tacacatgta tggtagta 2100  
ttccgttggg aatactactg ctccagccac cctgaatggt actgcagcaa 2150  
ccactactcc tttctcttac ttttcaaccg tcacagtaga gactatggaa 2200  
ccgtctcagg atgaggcacg gaccacagat aacaatgtgt gtccactcc 2250  
agtgtgcac tgggagacca ccaatgtgac cacctctctc acaccacaga 2300  
gcacaaggct gacagagaaa accttcacca tccagtgac tgatataaac 2350







Val Val Asp Trp Glu Thr Thr Asn Val Thr Thr Ser Leu Thr Pro  
485 490 495

Gln Ser Thr Arg Ser Thr Glu Lys Thr Phe Thr Ile Pro Val Thr  
500 505 510

Asp Ile Asn Ser Gly Ile Pro Gly Ile Asp Glu Val Met Lys Thr  
515 520 525

Thr Lys Ile Ile Ile Gly Cys Phe Val Ala Ile Thr Leu Met Ala  
530 535 540

Ala Val Met Leu Val Ile Phe Tyr Lys Met Arg Lys Gln His His  
545 550 555

Arg Gln Asn His His Ala Pro Thr Arg Thr Val Glu Ile Ile Asn  
560 565 570

Val Asp Asp Glu Ile Thr Gly Asp Thr Pro Met Glu Ser His Leu  
575 580 585

Pro Met Pro Ala Ile Glu His Glu His Leu Asn His Tyr Asn Ser  
590 595 600

Tyr Lys Ser Pro Phe Asn His Thr Thr Thr Val Asn Thr Ile Asn  
605 610 615

Ser Ile His Ser Ser Val His Glu Pro Leu Leu Ile Arg Met Asn  
620 625 630

Ser Lys Asp Asn Val Gln Glu Thr Gln Ile  
635 640

<210> 502  
<211> 2458  
<212> DNA  
<213> Homo Sapien

<400> 502  
gcgcggggag cccatctgcc ccaggggcca cggggcgcg ggccgggtcc 50  
cgcccgccac atggctgcag ccacctcgcg cgcaccccca ggcgcgcgcg 100  
ccagctcgcc cgaggtccgt cggaggcgcc cggccgcccc ggagccaagc 150  
agcaactgag cggggaagcg ccgcgctccg gggatcgga tgtccctcct 200  
ccttctctct ttgctagttt cctactatgt tggaaacctg ggaactcaca 250  
ctgagatcaa gagagtggca gaggaaaagg tcactttgcc ctgccaccat 300  
caactggggc ttccagaaaa agacactctg gatattgaat ggtgctcac 350  
cgataatgaa gggaaccaa aagtgggtgat cacttactcc agtcgtcatg 400  
tctacaataa cttgactgag gaacagaagg gccgagtggc ctttgcttcc 450  
aatttctgag caggagatgc ctcccttcag attgaacctc tgaagccag 500  
tgatgagggc cgggtacacct gtaagggtta gaattcaggc cgctactgtg 550  
ggagccatgt catcttaaaa gtcttagtga gaccatocaa gcccaagtgt 600



agaaaaaggg atctaggaat gctgaaagat tacccaacat accattatag 2250  
 tctcttcttt ctgagaaaaa gtgaaaccag aattgcaaga ctgggtggac 2300  
 tagaaagga gattagatca gttttctctt aatatgtcaa ggaaggtagc 2350  
 cgggcatggt gccaggcacc tgtaggaaaa tccagcaggt ggaggttgca 2400  
 gtgagccgag attatgccat tgcactccag cctgggtgac agagcgggac 2450  
 tccgtctc 2458

<210> 503  
 <211> 373  
 <212> PRT  
 <213> Homo Sapien

<400> 503  
 Met Ser Leu Leu Leu Leu Leu Leu Val Ser Tyr Tyr Val Gly  
 1 5 10 15  
 Thr Leu Gly Thr His Thr Glu Ile Lys Arg Val Ala Glu Glu Lys  
 20 25 30  
 Val Thr Leu Pro Cys His His Gln Leu Gly Leu Pro Glu Lys Asp  
 35 40 45  
 Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln  
 50 55 60  
 Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu  
 65 70 75  
 Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu  
 80 85 90  
 Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp  
 95 100 105  
 Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val  
 110 115 120  
 Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro  
 125 130 135  
 Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr  
 140 145 150  
 Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr  
 155 160 165  
 Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro  
 170 175 180  
 Pro Lys Ser Arg Ile Asp Tyr Asn His Pro Gly Arg Val Leu Leu  
 185 190 195  
 Gln Asn Leu Thr Met Ser Tyr Ser Gly Leu Tyr Gln Cys Thr Ala  
 200 205 210  
 Gly Asn Glu Ala Gly Lys Glu Ser Cys Val Val Arg Val Thr Val  
 215 220 225

Gln Tyr Val Gln Ser Ile Gly Met Val Ala Gly Ala Val Thr Gly	230	235	240
Ile Val Ala Gly Ala Leu Leu Ile Phe Leu Leu Val Trp Leu Leu	245	250	255
Ile Arg Arg Lys Asp Lys Glu Arg Tyr Glu Glu Glu Glu Arg Pro	260	265	270
Asn Glu Ile Arg Glu Asp Ala Glu Ala Pro Lys Ala Arg Leu Val	275	280	285
Lys Pro Ser Ser Ser Ser Ser Gly Ser Arg Ser Ser Arg Ser Gly	290	295	300
Ser Ser Ser Thr Arg Ser Thr Ala Asn Ser Ala Ser Arg Ser Gln	305	310	315
Arg Thr Leu Ser Thr Asp Ala Ala Pro Gln Pro Gly Leu Ala Thr	320	325	330
Gln Ala Tyr Ser Leu Val Gly Pro Glu Val Arg Gly Ser Glu Pro	335	340	345
Lys Lys Val His His Ala Asn Leu Thr Lys Ala Glu Thr Thr Pro	350	355	360
Ser Met Ile Pro Ser Gln Ser Arg Ala Phe Gln Thr Val	365	370	

<210> 504  
 <211> 3060  
 <212> DNA  
 <213> Homo Sapien

<400> 504  
 cgcgaggcgc ggggagcctg ggaccaggag cgagagccgc ctacctgcag 50  
 ccgcgcgccca cggcacggca gccaccatgg cgcctcctgct gtgcttcgtg 100  
 ctccctgtgcg gaggtagtggg tttcgcgaga agtttgagta tcactactcc 150  
 tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgccatgca 200  
 aatttacgct tagtcccgaa gaccaggagc cgcctggacat cgagtggtcg 250  
 atatcaccag ctgataatca gaagtggtat caagtgatta ttttatattc 300  
 tggagacaaa atttatgatg actactatcc agatctgaaa ggccgagtac 350  
 attttacgag taatgatctc aaatctggtg atgcatcaat aaatgtaacg 400  
 aatttaacac tgtcagatat tggcacatat cagtgcacaa tgaaaaaagc 450  
 tctctggtgtt gcaataaaga agattcatct ggtagttctt gtttagcctt 500  
 caggtgcgag atgttacgtt gatggatctg aagaaattgg aagtgacttt 550  
 aagataaaat gtgaacacaa agaaggttca cttccattac agtatgagtg 600  
 gcaaaaattg tctgactcac agaaaatgcc cacttcatgg ttagcagaaa 650  
 tgacttcatc tgttatatct gtaaaaaatg cctcttctga gtactctggg 700

acatacagct gtacagtcag aaacagagtg ggctctgac agtgccgtgt 750  
 cgctctaaac gttgtccctc cttcaataa agctggacta attgcaggag 800  
 ccattatagg aactttgctt gctctagcgc tcattggctt tatcatcttt 850  
 tgctgtcgta aaaagcgcag agaagaaaaa tatgaaaagg aagttcatca 900  
 cgatatcagg gaagatgtgc cacctccaaa gagccgtacg tccactgcc 950  
 gaagctacat cggcagtaat cattcatccc tggggtccat gtctccttcc 1000  
 aacatggaag gatattocaa gactcagtat aaccaagtac caagtgaaga 1050  
 ctttgaacgc actcctcaga gtccgactct cccacctgct aagttcaagt 1100  
 accottacaa gactgatgga attacagttg tataaatatg gactactgaa 1150  
 gaatctgaag tattgtatta tttagcttta ttttaggcct ctagtaaaga 1200  
 cttaaatgtt ttttaaaaa agcacaaggc acagagatta gagcagctgt 1250  
 aagaacacat ctactttatg caatggcatt agacatgtaa gtcagatgtc 1300  
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 gtgacactga tagttaaag atgttttatt atattttcaa taactaccac 1400  
 taacaaattt ttaacttttc atatgcatat tctgatatgt ggtcttttag 1450  
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 cgttctgttt aatgtttttg ctatttagtt aaatacattg aagggaata 1550  
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 ctcaaaactat tttttatttg caactacatg atttcacaca attctcttaa 1650  
 acaacgacat aaaatagatt tccttgata taaataactt acatacgctc 1700  
 cataaagtaa attctcaaag gtgctagaac aaatcgcca cttctacagt 1750  
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 tatcaatadc taaagtgcac atatttttta agaaagatta tttcaataa 1900  
 cttctataaa aataagtttg atggtttgga ccatctaact tcaactactat 1950  
 tagtaagaac ttttaacttt taatgtgtag taagggttat tctacctttt 2000  
 totcaacatg acaccaacac aatcaaaaac gaagttagtg aggtgctaac 2050  
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 taccatgtgc actggaattg ggcgatatgg tttatttttt cttccctgat 2150  
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 aggtggaat ataagtctg aaatctgtag ggaagagaac acattaagtt 2300

aattcaaagg aaaaaatcat catctatgtt ccagatttct cattaagac 2350  
aaagttacc acaacactga gatcacatct aagtgacact cctattgtca 2400  
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aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3050  
aaaaaaaaa 3060

<210> 505  
<211> 352  
<212> PRT  
<213> Homo Sapien

<400> 505  
Met Ala Leu Leu Cys Phe Val Leu Leu Cys Gly Val Val Asp  
1 5 10 15  
Phe Ala Arg Ser Leu Ser Ile Thr Thr Pro Glu Glu Met Ile Glu  
20 25 30  
Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu  
35 40 45  
Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser  
50 55 60  
Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser  
65 70 75  
Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg  
80 85 90  
Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile  
95 100 105  
Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys  
110 115 120  
Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu



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 ttctgccttc ctttgcctgc gacagcctct caaatgcaga tggttgtgct 350  
 cccttgctg ggttttacct tgcttctctg gagccaggta tcagggggccc 400  
 agggccaaga attccacttt gggccctgcc aagtgaaggg ggttgttccc 450  
 cagaaactgt gggaagcctt ctgggctgtg aaagacacta tgcaagctca 500  
 ggataacatc acgagtgcgc ggctgctgca gcaggaggtt ctgcagaacg 550  
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 ttgaaaactg ttttcaaaaa ccaccacaat agaacagtgt aagtcaggac 650  
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 aactgcaacc cagtcaagaa aatgagatgt tttccatcag agacagtgtca 750  
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 agcagctctg accaaaagccc ttggggaagt ggacattctt ctgacctgga 850  
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 tattacaact ctatttaatt aatgtcagta tttoaactga agttctattt 1150  
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 cttctttacc cctcacaatc cttgccacag tgtggggcag tggatgggtg 1250  
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 ttgttaaaaa acagagaggg atgcttggat gtaaaactga acttcagagc 1350  
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 ggggtaaggt gcatctgttt gaaaagtaaa cgataaaatg tggattaaag 1450  
 tgcccagcac aaagcagatc ctcaataaac atttcatttc ccaccacac 1500  
 tcgccagctc acccatcat cctttccctt tggtgccctc cttttttttt 1550  
 tatcctatgc attcttcctt aatcttcac ttgagtgtca agctgacctt 1600  
 gctgatgggt acattgcacc tggatgtact atccaatctg tgatgacatt 1650  
 cctgtctaataaaaagacaac ataactccaa aaaaaaaaaa aaaaaaaaaa 1700  
 aaaaa 1705

<210> 507

<211> 206

<212> PRT



<213> Homo Sapien

<400> 507

Met Asn Phe Gln Gln Arg Leu Gln Ser Leu Trp Thr Leu Ala Arg  
1 5 10 15  
Pro Phe Cys Pro Pro Leu Leu Ala Thr Ala Ser Gln Met Gln Met  
20 25 30  
Val Val Leu Pro Cys Leu Gly Phe Thr Leu Leu Leu Trp Ser Gln  
35 40 45  
Val Ser Gly Ala Gln Gly Gln Glu Phe His Phe Gly Pro Cys Gln  
50 55 60  
Val Lys Gly Val Val Pro Gln Lys Leu Trp Glu Ala Phe Trp Ala  
65 70 75  
Val Lys Asp Thr Met Gln Ala Gln Asp Asn Ile Thr Ser Ala Arg  
80 85 90  
Leu Leu Gln Gln Glu Val Leu Gln Asn Val Ser Asp Ala Glu Ser  
95 100 105  
Cys Tyr Leu Val His Thr Leu Leu Glu Phe Tyr Leu Lys Thr Val  
110 115 120  
Phe Lys Asn His His Asn Arg Thr Val Glu Val Arg Thr Leu Lys  
125 130 135  
Ser Phe Ser Thr Leu Ala Asn Asn Phe Val Leu Ile Val Ser Gln  
140 145 150  
Leu Gln Pro Ser Gln Glu Asn Glu Met Phe Ser Ile Arg Asp Ser  
155 160 165  
Ala His Arg Arg Phe Leu Leu Phe Arg Arg Ala Phe Lys Gln Leu  
170 175 180  
Asp Val Glu Ala Ala Leu Thr Lys Ala Leu Gly Glu Val Asp Ile  
185 190 195  
Leu Leu Thr Trp Met Gln Lys Phe Tyr Lys Leu  
200 205

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

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cggtctcagg agatgtctga ttccacaga catgcaccat atagaagaga 150  
gtttccaaga aatcaaaaga gccatccaag ctaaggacac cttcccaaat 200  
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250  
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 attgccaaact ctttcctcta catgcagaaa actctgcggc aatgtcagga 400  
 acagaggcag tgtcactgca ggaggaagc caccaatgcc accagagtca 450  
 tccatgacaa ctatgatcag ctggagggtcc acgctgtgct cattaaatcc 500  
 ctggggagagc togacgtctt tctagcctgg attaataaga atcatgaagt 550  
 aatgtttctca gcttgatgac aaggaacctg tatagtgtac cagggatgaa 600  
 caccocctgt gcggtttact gtgggagaca gccacacctg aaggggaagg 650  
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 taaactctat ctgctgaaag ggctcgcagg ccactcctgg agtaaagggc 800  
 tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850  
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<210> 509  
 <211> 177  
 <212> PRT  
 <213> Homo Sapien

<400> 509  
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 Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile 30  
 20 25 30  
 Ser Thr Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys 45  
 35 40 45  
 Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu 60  
 50 55 60  
 Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys 75  
 65 70 75  
 Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe 90  
 80 85 90  
 Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser 105  
 95 100 105  
 Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln 120  
 110 115 120  
 Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn 135  
 125 130 135  
 Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His 150  
 140 145 150  
 Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala  
170 175

<210> 510  
<211> 996  
<212> DNA  
<213> Homo Sapien

<400> 510  
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tccacaggtg tccactccca ggtccaactg caccctcggtt ctatcgataa 200  
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atttcgaccc ggagaactgc aggttccaac accagacgct ggaaaacggg 600  
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tctgtgcccg gaggaacgag atccccctaa ttcacttcaa ccccccata 750  
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gaacgtgctg aagccccggg cccggatgac cccggccccg gctcctgtt 850  
cacaggagct cccgagcgcc gaggacaaca gcccgatggc cagtgaacca 900  
ttaggggttg tcaggggcgg tcgagtgaac acgcacgctg ggggaacggg 950  
cccgaaggc tgcggccct tcgccaagtt catctagggt cgctgg 996

<210> 511  
<211> 251  
<212> PRT  
<213> Homo Sapien

<400> 511  
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1 5 10 15  
Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro  
20 25 30



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 acatctccca acttcatggt gctgatcgcc acctccgtgg agacatcagc 400  
 cgccagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450  
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 ccagcaggga ccctcttcc tctgtccctc cgactacaac caacagcagc 1400  
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 gactgcagct gcgttactgt gctgagaggt acccagaagg ttcccatgaa 1800  
 gggcagcatg tccaagcccc taaccccaga tgtggcaaca ggacctcgc 1850  
 tcacatccac cggagtgatg gtatggggag gggcttcacc tgttccca 1900

gggtgccttg gactcacott ggcacatgtt ctgtgtttca gtaaagagag 1950  
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 gtggcccaaa aaaaa 2015

<210> 513  
 <211> 482  
 <212> PRT  
 <213> Homo Sapien

<400> 513  
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 20 25 30  
 Arg Ala Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala  
 35 40 45  
 Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu  
 50 55 60  
 Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile  
 65 70 75  
 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg  
 80 85 90  
 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu  
 95 100 105  
 Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu  
 110 115 120  
 Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro  
 125 130 135  
 Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu  
 140 145 150  
 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr  
 155 160 165  
 Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser  
 170 175 180  
 Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser  
 185 190 195  
 Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg  
 200 205 210  
 Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile  
 215 220 225  
 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu  
 230 235 240  
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile  
 245 250 255

Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp
				260					265					270
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser
				275					280					285
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile
				290					295					300
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr
				305					310					315
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro
				320					325					330
Thr	Asn	Ser	Ala	Thr	Glu	Arg	Glu	Val	Thr	Ala	Pro	Gly	Ala	Thr
				335					340					345
Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu
				350					355					360
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val
				365					370					375
Ser	Gly	Ala	Ala	Pro	Val	Ser	Ile	Glu	Ala	Gly	Ser	Ala	Val	Gly
				380					385					390
Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro
				395					400					405
Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr
				410					415					420
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro
				425					430					435
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr
				440					445					450
Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met
				455					460					465
Lys	Pro	Gln	Gln	Pro	Arg	Pro	Arg	Leu	Pro	Gly	Arg	Gly	Arg	Pro
				470					475					480

Gln Thr

<210> 514  
 <211> 2284  
 <212> DNA  
 <213> Homo Sapien

<400> 514  
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 ggcgcgcggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150  
 cttcttaaaag caaactaaga ccagaggagg gattatcctt gacctttgaa 200  
 gaccaaact aaactgaaat ttaaaatggt cttcggggga gaaggagact 250

tgacttacac tttgtaata atttgcttcc tgacactaag gctgtctgct 300  
 agtcagaatt gcctcaaaaa gagtctagaa gatgttgtca ttgacatcca 350  
 gtcatctctt tctaagggaa tcagaggcaa tgagcccga tataactcaa 400  
 ctcaagaaga ctgcattaat tcttgctgtt caacaaaaaa catacaggg 450  
 gacaaagcat gtaacttgat gatottcgac actcgaaaa cagctagaca 500  
 acccaactgc tacctatttt tctgtcccaa cgaggagcc tgtccattga 550  
 aaccagcaaa aggacttatg agttacagga taattacaga tttccattct 600  
 ttgaccagaa atttgccaag ccaagagtta ccccgaggag attctctctt 650  
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 cttccagccc acagctggcc accacagctc cacctgtaac cactgtcact 1050  
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 tacactccaa gcaatggcta caacagcagt tctgactacc accttcagg 1150  
 cacctacgga ctcgaaaggc agcttagaaa ccataccgtt tacagaaatc 1200  
 tccaacttaa ctttgaacac agggaatgtg tataacccta ctgcactttc 1250  
 tatgtcaaat gtggagtctt ccaactatga taaaactgct tccagggaag 1300  
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 cagtaaggcc ttccatttga aaaatggctt cttatcggtt cctgtctctt 1400  
 tgggtgctctg ttctgtgtga taggctctgt cctctgggtt agaactcttt 1450  
 cggaaactact ccgcaggaaa cgttactcaa gaactggatta ttgatcaat 1500  
 gggatctatg tggacatcta aggatggaac tcggtgtctc ttaattcatt 1550  
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 acacctgggt gatttttgta ttttagtag agacgggggt tcaecatgtt 1850



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<210> 515  
 <211> 431  
 <212> PRT  
 <213> Homo Sapien

<400> 515  
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 Ile Cys Phe Leu Thr Leu Arg Leu Ser Ala Ser Gln Asn Cys Leu  
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 Lys Lys Ser Leu Glu Asp Val Val Ile Asp Ile Gln Ser Ser Leu  
 35 40 45  
 Ser Lys Gly Ile Arg Gly Asn Glu Pro Val Tyr Thr Ser Thr Gln  
 50 55 60  
 Glu Asp Cys Ile Asn Ser Cys Cys Ser Thr Lys Asn Ile Ser Gly  
 65 70 75  
 Asp Lys Ala Cys Asn Leu Met Ile Phe Asp Thr Arg Lys Thr Ala  
 80 85 90  
 Arg Gln Pro Asn Cys Tyr Leu Phe Phe Cys Pro Asn Glu Glu Ala  
 95 100 105  
 Cys Pro Leu Lys Pro Ala Lys Gly Leu Met Ser Tyr Arg Ile Ile  
 110 115 120  
 Thr Asp Phe Pro Ser Leu Thr Arg Asn Leu Pro Ser Gln Glu Leu  
 125 130 135  
 Pro Gln Glu Asp Ser Leu Leu His Gly Gln Phe Ser Gln Ala Val  
 140 145 150  
 Thr Pro Leu Ala His His His Thr Asp Tyr Ser Lys Pro Thr Asp  
 155 160 165  
 Ile Ser Trp Arg Asp Thr Leu Ser Gln Lys Phe Gly Ser Ser Asp  
 170 175 180  
 His Leu Glu Lys Leu Phe Lys Met Asp Glu Ala Ser Ala Gln Leu  
 185 190 195

Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser Gln Phe Ser  
 200 205 210  
 Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val Ser Ala  
 215 220 225  
 Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser Ala  
 230 235 240  
 Thr Pro Lys Pro Ala Thr Leu Leu Pro Thr Asn Ala Ser Val Thr  
 245 250 255  
 Pro Ser Gly Thr Ser Gln Pro Gln Leu Ala Thr Thr Ala Pro Pro  
 260 265 270  
 Val Thr Thr Val Thr Ser Gln Pro Pro Thr Thr Leu Ile Ser Thr  
 275 280 285  
 Val Phe Thr Arg Ala Ala Ala Thr Leu Gln Ala Met Ala Thr Thr  
 290 295 300  
 Ala Val Leu Thr Thr Thr Phe Gln Ala Pro Thr Asp Ser Lys Gly  
 305 310 315  
 Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu  
 320 325 330  
 Asn Thr Gly Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn  
 335 340 345  
 Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg  
 350 355 360  
 Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn  
 365 370 375  
 Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu  
 380 385 390  
 Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly  
 395 400 405  
 Arg Ile Leu Ser Glu Ser Leu Arg Arg Lys Arg Tyr Ser Arg Leu  
 410 415 420  
 Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile  
 425 430

<210> 516

<211> 2749

<212> DNA

<213> Homo Sapien

<220>

<221> unsure

<222> 1869, 1887

<223> unknown base

<400> 516

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gcgggttcga aggggacact gtgtccctgc agtgcaccta caggggaagag 150  
 ctgaggggacc accggaagta ctggtgcagg aaggggtggga tcctcttctc 200  
 tcgctgtctct ggcaccatct atgcagaaga agaaggccag gagacaatga 250  
 agggcagggt gtccatccgt gacagccgcc aggagctctc gctcattgtg 300  
 accctgtgga acctcaccct gcaagacgct ggggagtact ggtgtggggg 350  
 cgaaaaacgg ggccccgatg agtcttact gatctctctg ttctctttc 400  
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 acaacacgcc tgcagcccaa ggcaaaagct cagcaaaccg agccccagg 500  
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 agacaggggc tgaggccct ccattgccag ggacttccca gtacgggcac 600  
 gaaaggactt ctcatgacac aggaacctct cctcaccag cgacctctcc 650  
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 agccctggag ccagagogg tggccttgct cttccggctg gagactggga 1250  
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 cagcagggcc agacaaggct cagtggatct ggtctgagtt tcaatctgcc 1350  
 aggaactcct gggcctcatg ccagtgctg gacctgcct tcctcccact 1400  
 ccagacccca ccttgcttcc cctccctggc gtctcagac ttagtccac 1450  
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 gtgaaaaacg tgattcctgg cccaccaag acccaccaaa accatctctg 1600  
 ggcttggtgc aggactctga attctaaca tgcccagtga ctgtcgact 1650  
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Lys Gly Arg Val Ser Ile Arg Asp Ser Arg Gln Glu Leu Ser Leu  
 80 85 90  
 Ile Val Thr Leu Trp Asn Leu Thr Leu Gln Asp Ala Gly Glu Tyr  
 95 100 105  
 Trp Cys Gly Val Glu Lys Arg Gly Pro Asp Glu Ser Leu Leu Ile  
 110 115 120  
 Ser Leu Phe Val Phe Pro Gly Pro Cys Cys Pro Pro Ser Pro Ser  
 125 130 135  
 Pro Thr Phe Gln Pro Leu Ala Thr Thr Arg Leu Gln Pro Lys Ala  
 140 145 150  
 Lys Ala Gln Gln Thr Gln Pro Pro Gly Leu Thr Ser Pro Gly Leu  
 155 160 165  
 Tyr Pro Ala Ala Thr Thr Ala Lys Gln Gly Lys Thr Gly Ala Glu  
 170 175 180  
 Ala Pro Pro Leu Pro Gly Thr Ser Gln Tyr Gly His Glu Arg Thr  
 185 190 195  
 Ser Gln Tyr Thr Gly Thr Ser Pro His Pro Ala Thr Ser Pro Pro  
 200 205 210  
 Ala Gly Ser Ser Arg Pro Pro Met Gln Leu Asp Ser Thr Ser Ala  
 215 220 225  
 Glu Asp Thr Ser Pro Ala Leu Ser Ser Gly Ser Ser Lys Pro Arg  
 230 235 240  
 Val Ser Ile Pro Met Val Arg Ile Leu Ala Pro Val Leu Val Leu  
 245 250 255  
 Leu Ser Leu Leu Ser Ala Ala Gly Leu Ile Ala Phe Cys Ser His  
 260 265 270  
 Leu Leu Leu Trp Arg Lys Glu Ala Gln Gln Ala Thr Glu Thr Gln  
 275 280 285  
 Arg Asn Glu Lys Phe Trp Leu Ser Arg Leu Thr Ala Glu Glu Lys  
 290 295 300  
 Glu Ala Pro Ser Gln Ala Pro Glu Gly Asp Val Ile Ser Met Pro  
 305 310 315  
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<210> 518

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 518

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<210> 519

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 519

ctgtcttccc ctgcttggt gtgg 24

<210> 520

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 520

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<210> 521

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 521

ccagtgcaca gcaggcaacg aagc 24

<210> 522

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 522

actaggctgt atgcctgggt gggc 24

<210> 523

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 523

gtatgtacaa agcatcggca tggttgcagg agcagtgcaca ggc 43

<210> 524

<211> 26

<212> DNA

<213> Artificial Sequence

<220>



<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 530

cggtgccctg ctctttgg 18

<210> 531

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

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